BRITISH
COLUMBIA

Ministry of Transportation

Contract No. 09902 WP2

Sunset Beach to Lions Bay

Design / Build

Request for Proposal

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Design / Build

Request for Proposal

DOCUMENT RELEASE

Prepared by: ____________________ Date: ______________
Name

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Signature

Reviewed by;____________________ Date: ______________
Name

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Signature

Approved by;____________________ Date: ______________
Name

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Signature

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1.0 REQUEST FOR PROPOSAL GENERAL CONDITIONS

1.1 SUMMARY OF KEY INFORMATION

Title of Request for Proposal:	Sunset Beach to Lions Bay Project – Design / Build
Project No.:	09902 WP2
Contact Person:	**Contact Person** for this RFP is: Name: Maria Ciarniello Address: 5A 940 Blanshard Street Victoria, British Columbia V8W 9T5 Facsimile: 250-356-2112 Email: Maria.Ciarniello@gems6.gov.bc.ca **No telephone queries please.**
Pre-Submission Briefing Meeting:	A pre-submission briefing will be held at the offices of SNC-Lavalin Inc., in Boardroom A at: 1800 – 1075 West Georgia Street in Vancouver. Proponents will be advised of the date and time.
Reference Document Viewing:	Reference documents may be viewed at the offices of SNC-Lavalin Inc. at: 1800 – 1075 West Georgia Street in Vancouver, by appointment between 8:30 am and 4:30 pm Monday to Thursday. Proponents may not book successive days for document viewing. Contact Joseph Rectin at 604 662 3555 to book viewing appointments.
Closing Time for Proposal Submission:	Complete and final Proposals must be delivered on or before April 22, 2004 at 2:00 pm PDST Local Time.
Closing Location:	Ministry of Transportation South Coast Region Courier or Hand Deliver to: 7818 Sixth Street, 3rd Floor Reception Burnaby, British Columbia V3N 4N8 Attention: Maria Ciarniello

105-06599/

1.2 GENERAL INFORMATION

1.2.1 Introduction

The Province, as represented by the Minister of Transportation (the "Ministry") requires the services of a suitably qualified Design/Build Contractor to undertake construction of the Sunset Beach to Lions Bay Design / Build as part of the Sea to Sky Highway Improvement Project (STS Project).

The purpose of this Request for Proposal ("RFP") is to invite those Proponents short-listed through the RFQ process to submit a Proposal to design and construct the Sunset Beach to Lions Bay Design / Build

1.2.2 Test Section

The Ministry is currently undertaking the construction of a portion of the highway between Montizambert Creek and Strip Creek, referred to as the "Test Section", within the limits of the Sunset Beach to Lions Bay - Design/Build in order to gain specific knowledge of geotechnical, constructibility and traffic management issues in a manner and sufficiency that can be shared with the design/construction industry at large.

It is anticipated that the following steps will be undertaken during the proposal period as information is attained:

- Records of value engineering work will be provided to Proponents;
- Construction drawings will be provided to Proponents;
- Proponent teams will be offered opportunities to view current construction activities subject to the requirements of the Worker's Compensation Board and associated safety plans;
- Geotechnical conditions reports will be provided to Proponents
- Reports on Traffic Management will be provided to Proponents.

All information relating to construction costs and project costs is considered confidential and will not be issued to Proponents.

The Contractor for the Test Section is Emil Anderson Construction (EAC) Inc.

1.2.3 Preliminary Design

The Ministry has commissioned the preparation of a Preliminary Design which has identified an alignment within the constraints identified. As part of the Test Section design development, a detailed design of northbound highway, including some rock cuts, within the Test Section was also completed. The Preliminary Design and the detailed design of the northbound highway are provided to the Proponent, and subsequent Contractor, for information only and the Ministry makes no representation as to its completeness nor constructibility. The Proponent shall propose a design which is compliant with the requirements of the

RFP and such design may or may not be based upon or incorporate features of the Preliminary Design, all at the Proponent's discretion provided such design is compliant with the requirements of the RFP.

1.2.4 Environmental Assessment

On February 3, 2003, the EAO Project Assessment Director issued an Order under section 10(1)(c) of the *Environmental Assessment Act* establishing that an environmental assessment certificate is required for the Sea-to-Sky Highway Improvement Project and that the project may not proceed without an assessment under the Act. The Ministry of Transportation has applied to the BC Environmental Assessment Office (the "EAO") for an environmental assessment certificate for the Sea-to-Sky Highway Improvement Project. The project is also subject to the *Canadian Environmental Assessment Act*. The EAO Project Assessment Director has negotiated with federal government officials a project-specific work plan, dated June 12, 2003, for a cooperative environmental assessment of the Sea-to-Sky Highway Improvement Project.

The Environment Assessment Certificate, when issued by the EAO, will include design and construction commitments that will be binding and the responsibility of the Contractor. A copy of the certificate, which is expected to be issued in April, 2004, and all associated compliance commitments will be provided to the Proponent as an addenda to the RFP. Items in the certificate documents that are the responsibility of the Contractor will be identified as such. Construction of the Sunset Beach to Lions Bay Design / Build is expected to commence in the summer of 2004, after certification, and appropriate environmental requirements and permits are in place. The Contractor should be aware that any substantive deviations from the Project design that is certified may require further review by the Environmental Assessment Office. Obtaining certification and approvals for any deviations is the responsibility of the Contractor.

The certificate and associated compliance commitments will include impact management measures in the following areas that the Contractor will be obliged to adhere to during both the design and construction of the Project:

- general environmental management measures and procedures
- potentially acid generating and metal leaching materials and acid rock drainage
- contaminated soils
- terrestrial environment, including wildlife and vegetation ecosystems
- fisheries and aquatic habitat
- air quality
- socio-community/economic aspects, including community access
- noise
- water quality
- recreation

- archaeology, culture and heritage
- navigable waters
- aesthetics
- first nations
- public and stakeholder consultations
- federal department, provincial agency and local government consultations, agreements, permits and/or approvals

For an understanding of the items that may be in the certificate documents and the responsibility of the Contractor, the Proponents are referred to Volume 5, Section A-1 Proposed Impact Management Measures, *Sea-to-Sky Highway Improvement Project Application*, August 2003 and all commitments made in subsequent response letters provided by the Ministry of Transportation (available for viewing on the Environmental Assessment Office website at www.eao.gov.bc.ca). The proponents are advised that these documents are not considered exhaustive and only the certificate and associated compliance commitments that are to be provided to the Proponent as an amendment to the RFP shall be considered the final and complete Contract requirements.

1.2.5 Project Implementation Incentives

The Sunset Beach to Lions Bay Design/Build is the first major STS Project contract to be procured and its on time completion is critical to ensuring timely starts for other corridor construction projects. Incentives are provided where payment is made to the Ministry for late construction completion, and early payment is made to the Contractor for early construction completion. Further details on these incentives are described in the Design/Build Agreement.

A goal of the project is to initiate a construction program that provides the maximum predictability with minimized impacts to the travelling public. Traffic Disruption Charges, as identified in Schedule J, are initiated to maintain predictability of the traffic management regime.

1.3 Instructions to Proponents

Eligible Parties

This RFP is only open to those parties who have:

a) responded to the Request for Qualifications (RFQ), published by the Ministry; and

b) subsequently been invited by the Ministry to respond to this RFP.

The Ministry will not consider Proposals from any other party.

Complete RFP

It is the Proponent's sole responsibility to ensure that they have verified receipt of a complete RFP, including any and all Addenda.

Each and every Proposal shall be deemed to be made on the basis of the entire RFP, including any and all Addenda, issued prior to the Closing Time.

Request for Clarification

Proponents must direct any requests for clarification or enquiries relating to this RFP in writing to the Contract Person. Information obtained from any source other than the Contact Person is not official, will not be binding on the Ministry, and must not be relied on or otherwise used in any way for any purpose whatsoever.

By delivery of a Proposal the Proponent is deemed to have received, accepted, and understood the entire RFP, including any and all Addenda.

Addenda

The Ministry may, in its sole discretion, at any time and from time to time, amend this RFP by means of written Addenda issued through the Contact Person. This RFP may not be amended in any other way whatsoever by anyone. The Ministry makes no guarantee, warranty or representation as to timely delivery of any Addenda.

Pre-Submission Briefing

Where the Summary of Key Information indicates that a pre-submission briefing has been scheduled; all eligible parties are strongly encouraged to attend. Attendance is not mandatory.

The Ministry may, in its sole discretion, schedule additional briefings. Minutes of briefings will not be available.

Neither verbal information nor written information disclosed at any briefing forms a part of this RFP. The Ministry may, in its sole discretion, expressly incorporate into this RFP any such information by Addendum.

Independent Investigation

By delivery of a Proposal, each Proponent represents, warrants and agrees that:

- the Proponent has fully investigated and satisfied itself of all conditions relating to, affecting, or that may affect the Work, including but not limited to, the Site conditions, and the labour, equipment, material, and other resources to be provided to perform the Work and the Contract;

- the Proponent's investigation is based on its own independent examination, experience, knowledge, information, and judgement, and not upon any statement, representation, or information provided by or on behalf of the Ministry; and
- the Proponent is willing to assume and does assume all risks regarding conditions relating to, affecting, or that may affect the Work, including without limitation, the Site conditions, whether or not any such conditions are revealed by an information available to, or investigations undertaken by, the Proponent, and the labour, equipment, material and other resources to be provided the Work and the Contract.

Access to the Site

For the purposes of investigations prior to the Closing Time a Proponent may request, in writing to the Contact Person, access to the Site detailing the activities proposed. The Ministry will make reasonable efforts to allow Proponents the proposed access. Access is limited to those portions of the Site owned by the Ministry and is subject to environmental, safety, and time constraints.

Proponents must make their own arrangements with property owners prior to entering any portions of the Site not owned by the Ministry.

As a condition of entering any portion of the Site, the Proponent irrevocably accepts full liability for any and all events arising from or in connection with any Site access, and the Proponent indemnifies the Ministry, its servants, agents, representatives, and employees, for any loss or damages suffered by the Proponent, the Ministry, or any third party arising, either directly or indirectly, in contract or in tort, from or in connection with the Proponent's investigation.

Licenses and Permits

The Proponent assumes full responsibility for obtaining and holding all rights, permits, licences, consents, approvals and authorities issued by any level or agency of government or private party that are required to carry out the Work and perform the Contract; except as otherwise stated in this RFP.

Revisions to Proposals

Any and all Revisions must be in writing, executed by an Authorized Signatory of the Proponent, and received in the Closing Location before the Closing Time. The name, position or title of the Authorized Signatory, and the email address or facsimile number of the Authorized Signatory should be indicated below the signature.

The Proponent assumes all responsibility for the timely and effective delivery of any Revision. Neither the Ministry, nor its employees, servants, agents, or representatives shall assume any responsibility for timely receipt of any Revisions.

Each Revision must substantially comply with the following requirements:

a) clearly identify the Proponent and the RFP Title;
b) state the Closing Time and Closing Location;
c) clearly identify the item(s) being amended by the Proponent and, if applicable, clearly state the amount by which any Item Price is to be increased or decreased; and
d) not disclose the revised Contract Price.

The Closing Location address for delivery of Revisions is shown on the Summary of Key Information. No other address is valid.

Each Revision should be numbered sequentially by the Proponent. Unless the Proponent clearly stipulates to the contrary on the face of each Revision; each Revision will be considered by the Ministry to have been sent by the Proponent in the sequence that each such Revision is received by the Ministry, and each successive Revision shall nullify and replace any and all previous Revision(s) to the identified item(s).

Withdrawal of Proposals

A Proponent may withdraw its Proposal at any time before Closing Time, by submission of a written notice, delivered to the Contact Person at the Closing Location, that in the Ministry's sole discretion, clearly and unequivocally states the Proponent's intention to withdraw its Proposal.

Any Proposal not withdrawn before Closing Time will be irrevocable at Closing Time and will remain irrevocable for sixty (60) days from the Closing Time.

Proponent's Expenses

Proponents are solely responsible for their own costs and expenses in preparing a Proposal, responding to requests for clarifications and further information, and for any subsequent processes or negotiations with the Ministry.

Acceptance of Proposals

This RFP is not an agreement to purchase goods or services. The Ministry is not obligated to award or enter into a Contract with any Proponent, including without limitation, with the highest rated Proposal.

Neither acceptance of a Proposal nor execution of a Contract will constitute approvals of any activity, work, or development contemplated in any Proposal that requires any approval, permit or licence pursuant to any applicable laws, regulations, and bylaws.

Modification of Terms

The Ministry reserves the right to amend the terms of this RFP at any time, by Addenda, including the right, at any time, in its sole discretion, to cancel or amend the processes described in this RFP.

Non-Collusion

A Proponent shall not discuss or communicate with any other Proponent about the preparation of its Proposal. Each Proponent shall ensure that its participation and that of its team members and senior representatives in this RFP process is conducted without collusion.

No Proponent or any of its senior representatives may have any interest whatsoever in the Proposal of any other Proponent, either directly or indirectly, nor enter into any agreement that could, in the sole discretion of the Ministry, create such an interest. If the Ministry determines, in its sole discretion, either before or after Closing Time, or after the execution of the Contract, that such as interest did or does exist, the Ministry may, in its sole discretion disqualify the Proposal, or terminate the Contract.

No Lobbying

All Proponents are expressly forbidden from lobbying any employee of the Ministry or its consultants regarding this RFP process. Failure to comply with this term may, in the sole discretion of the Ministry, lead to disqualification without further notice or warning.

Form of Acceptance

A written notice in the form of a Notice of Award is the only valid form of acceptance by the Ministry for any Proposal.

Signing of the Agreement

By submitting a Proposal, the Proponent agrees that, upon the Award, the Proponent shall execute the Contract within fourteen (14) days of the date on which the Ministry requests it to do so.

Prior to Commencement of Work

By submitting a Proposal, the Proponent agrees that within fourteen (14) days of the date of the Notice of Award and prior to commencement of Work on the Site, the Proponent shall obtain and deliver to the Ministry:

- the Bonds;
- a valid Worker's Compensation Board registration number; and

- evidence of compliance with the Insurance Specifications.

If the Proponent fails or refuses to:

- sign the Contract;
- deliver the Bonds;
- deliver a valid Worker's Compensation Board registration number; or
- deliver evidence satisfactory to the Ministry, in its sole discretion, of compliance with the Insurance Specifications,

within the time allotted, the Ministry shall have the right to make demand on the full amount of the Proposal Security.

Ownership of Proposals

All documents, including Proposals, submitted to the Ministry become the property of the Ministry and are subject to disclosure pursuant to the *Freedom of Information and Protection of Privacy Act*.

Limitation of Damages

Each Proponent, by submitting a Proposal, irrevocably agrees that:

a) if the Ministry cancels this RFP process or rejects all Proposals, the Proponent shall not claim, and that neither the Ministry nor its servants, agents, representatives, and employees will be liable to the Proponent or any person, in contract, in tort, or otherwise, for any costs, expenses, compensation, damages, or anything whatsoever, including without limitation, for loss of revenue, opportunity, or anticipated profit, connection with this RFP, any subsequent processes, any Contract, or any matter whatsoever; and

b) in circumstances where the Ministry does not cancel this RFP process or does not reject all Proposals,

  i) the Proponent will not claim, in contract, in tort, or otherwise, for costs, expenses, compensation, damages, or anything whatsoever, in excess of an amount equivalent to the actual and reasonable costs directly incurred by the Proponent in preparing its Proposal; and

  ii) neither the Ministry nor its servants, agents, representatives, and employees, will be liable to the Proponent, in contract, in tort, or otherwise, for costs, expenses, compensation, damages, or anything whatsoever, in excess of the actual and reasonable costs directly incurred by the Proponent in preparing its Proposal.

RFP Information

Any information, statements, representations, data, preliminary design or conclusions, set out in or available through this RFP, including any verbal or written information disclosed or made available in or through any pre-submission briefing, including any information subsequently incorporated into this RFP by way of Addenda, is not stated, guaranteed, represented or warranted to be accurate, complete, relevant, comprehensive, exhaustive or reliable by the Ministry, in whole or in part, and shall not be considered or treated as such by a Proponent, or by any person whatsoever.

The Proponent acknowledges and agrees that it has not relied upon any representation, statement, guarantee or warranty by the Ministry, with respect to the completeness, accuracy or relevance of any information, statement, representation, data, or conclusions, provided in this RFP, or on any analysis or interpretation thereof, and any reliance thereon or use made thereof by the Proponent shall be at the sole risk of the Proponent.

Dispute Resolution

Each Proponent, by submitting a Proposal, irrevocably agrees that:

a) The Proponent shall, within fourteen (14) days of any dispute arising in connection with this RFP, submit written notice to the Contact Person of such dispute; and

b) All disputes not resolved through negotiation between the Ministry and the applicable Proponent within twenty one (21) days of the date of the written notice to the Contact Person will be referred to and finally resolved by binding arbitration in accordance with the Commercial Arbitration Act.

Headings and Captions

The headings and captions in this RFP are inserted for convenience only and do not form a part of this RFP and in no way define, limit, alter or enlarge the scope of meaning or any term of this RFP.

1.4 GLOSSARY OF TERMS

In this RFP, the following words and phrases have the meanings shown:

"Addendum" means each and every written document issued by the Contact Person which changes, amends or corrects this RFP;;

"Agreement" has the same meaning as Contract;

"Authorized Signatory or Authorized Signatories" means a person or persons having legal authority to execute all documentation on behalf of the Proponent and to legally bind the Proponent;

"Bonds" means the performance and the labour and material payment bonds for the Project, as required by the Agreement, in the form set out in Schedule A;

"Closing Location" means the location identified as such in the Summary of Key Information forming a part of this RFP;

"Closing Time" means the date and time identified as such in the Summary of Key Information forming a part of this RFP;

"Construction Schedule" means the Schedule described as such in the Agreement;

"Contact Person" means the person identified as such in the Summary of Key Information forming a part of this RFP and being the only authorized representative of the Ministry for this RFP;

"Contract" means the written agreement for the performance of the Work, in the form substantially the same as the form of agreement entitled "Design/Build Agreement" forming a part of this RFP, and duly executed on behalf of the Ministry and the Contractor;

"Contract Price" means the sum of the Item Prices shown in the Schedule of Prices, as calculated by the Ministry;

"Contractor" has the same meaning as "Design-Builder" and means the Proponent who enters into a Contract with the Ministry for the performance of the Work;

"Core Team" means any principal, partner, employee, subcontractor, or other professional or technically qualified individual nominated by the Proponent in its Proposal to actively participate in the performance of the Work;

"Environmental Assessment Certificate" means the legally binding document issued by the Environmental Assessment Office without which the Project may not proceed;

"Environmental Monitor" means the member of the Core Team nominated by the Proponent to monitor the Contractor's compliance with the environmental protection aspects of the Project.

"Item Price" means the price shown in the Schedule of Prices for the identified portion of the Work and shall include allowance for all costs incidental to the Work;

"Ministry" means the Her Majesty the Queen in Right of the Province of British Columbia, as represented by the Minister of Transportation;

"Preliminary Design" means the preliminary design prepared by Associated Engineering (B.C.) Ltd. entitled "Highway 99, Section 2, Sunset Beach to Kelvin Grove, Preliminary Design Report" dated September 2003;

"Project" means the reconstruction of the existing section of the Sea to Sky Highway between Ansell Place and Kelvin Grove, excluding the Test Section, in accordance with the Agreement;

"Project Manager" means the individual nominated by the Proponent to represent the Proponent in any Contract and to take overall responsibility for the planning and performance of the Work;

"Proponent" means a party who is eligible to respond to this RFP;

"Proposal" means a Proponent's entire submission, including Revisions considered valid by the Ministry, delivered by the Proponent in response to this RFP, in compliance with the terms of this RFP;

"Proposal Security" means the security in the form, and containing the terns and for the value specified in the RFP;

"Rate Criteria" means the criteria described in this RFP that the Ministry anticipates using to determine the preferred Proponent;

"Request for Proposals" or **"RFP"** means all of the component documents described in the Order of Contents, including any and all Addenda, as issued by the Contact Person prior to Closing Time;

"Request for Qualifications" or **"RFQ"** means the document including any and all Addenda, as previously distributed and amended by the Ministry in anticipation of this RFP;

"Response" means a statement of qualifications and other information submitted in response to the RFQ, and in accordance with the terms of the RFQ;

"Respondent" means an individual or a company that submitted a Response to the RFQ;

"Revision" means an amendment made in writing by a Proponent to its Proposal, in accordance with the terms of this RFP;

"Shortlist" means the list of Respondents possessing the qualifications described in the RFQ that have satisfied any conditions set by the Ministry for being added to, and staying on, that list;

"Site" means the area within the Limits of Construction and any areas outside those limits affected or occupied by the Contractor in the performance of the Work;

a) vested as highway as defined in the Highway Act, R.S.B.C. 1996, c.188, and,

   i) on or within the Limits of Construction, and

   ii) outside the Limits of Construction, where described, referenced or designated in the Traffic Management Plan, the Special Provisions, the Standard Specifications and the Traffic Control Manual for Work on Roadways, as the case may be,

b) within the licenses to construct that are indicated or referenced in the Drawings, Design or Special Provisions, and

c) all additional areas as may, from time to time, be designated in writing or be depicted by Drawings by the Ministry pursuant to the Agreement;

"Summary of Key Information" means the document of the same name, forming part of this RFP; and

"Work" means the provision of all labour, services, material and equipment and any action as necessary for the Contractor to complete and perform its obligations in accordance with the terms and conditions of the Agreement.

Any terms not set out above in this "Glossary of Terms for RFP" which are capitalized and are defined in the form of agreement entitled "Design/Build Agreement" that forms a part of this RFP, will have the same meaning through this RFP as set out in the definitions listed in that Design/Build Agreement

1.5 PROPOSAL SUBMISSION REQUIREMENTS

The following delivery, format, and content requirements should be followed for all Proposals in order to facilitate consistency in Proposal evaluation and to facilitate consideration of each Proposal.

Delivery

Proposals must be delivered by hand or courier to the Closing Location before the Closing Time.

Proposals, excluding Revisions, submitted by mail, facsimile or by email will be rejected.

Proposals are to be delivered in one or more packages clearly labelled with the "RFP Title", "Contact Person", and "Closing Location" all as shown on the RFP Summary of Key Information. The name and mailing address of the Proponent should be clearly shown on the exterior of each Proposal package.

The Proponent is solely responsible for ensuring that all packages forming a part of its Proposal are securely sealed, clearly labelled to identify the number of parcels or boxes comprising the whole Proposal, the Project name, the contents of each package, and the Proponent.

Neither the Ministry, nor its employees, servants, agents, or representatives shall be in any way responsible for timely receipt of any Proposal , any part of a Proposal any Revision, or any part of a Revision.

Proposal Content

Note: Information provided by the Ministry on any form that is part of this RFP and required to be submitted as part of a Proposal shall not be altered or contradicted in any way.

Note: Incomplete Proposals may be disqualified at the sole discretion of the Ministry. Each complete Proposal shall include the following component package:

The Proposal submission shall be comprised of:

- Transmittal Package;
- Technical Proposal ;
- Price Proposal;

all as described in Part 1 of this RFP.

Each document shall be properly executed original that is fully compliant in form and content with the specimen documents provided in Part 1.7 of this RFP.

Full sheet, half size and electronic copies in AutoCad ver. 14 of the drawings shall be provided. The electronic files shall be provided on CD.

1.5.1 Transmittal Package Requirements

The Transmittal Package shall be a separate, sealed envelope, clearly marked "Transmittal Package", identifying the Proponent's name and the Project Number, and containing one (1) each of the following documents:

1. Proposal Cover Letter
2. Proposal Security
3. Consent of Surety
4. Insurance Undertaking

Each document shall be a properly executed original that is fully compliant in form and content with the specimen documents provided here in this RFP.

a) Proposal Cover Letter

The terms and conditions of the Proposal Cover Letter shall be fully compliant with those of the specimen Proposal Cover Letter provided here in this RFP.

b) Proposal Security

The Proposal security shall be either:

- a properly executed irrevocable Letter of Credit from a recognized Canadian financial institution payable to the **Minister of Finance** in the amount of **$200,000.00** in Canadian funds on presentation of demands for payment signed by an Assistant Deputy Minister of Transportation at an office to be specified by the financial institution that is located in **Vancouver, British Columbia** that shall remain in effect until at least noon on the 30th of July 2004. The terms and conditions of the Irrevocable Letter of Credit shall be fully compliant with those of the specimen Irrevocable Letter of Credit provided in this RFP.

  OR

- a bank draft or money order from a recognized Canadian financial institution payable to the Minister of Finance in the amount of $200,000.00 in Canadian funds.

No other form of Proposal Security shall be accepted.

c) Consent of Surety

The terms and conditions of the Consent of Surety shall be fully compliant with those of the specimen Consent of Surety provided here in this RFP.

d) Insurance Undertaking

The terms and conditions of the Insurance Undertaking shall be fully compliant with those of the specimen Insurance Undertaking provided here in this RFP.

1.5.2 Price Proposal Requirements

The Price Envelope shall be a separate, sealed envelope, clearly marked "Price Envelope", identifying the Proponent's name and the Project number, and containing one (1) each of the following two documents which collectively comprise the Schedule of Prices.

1. Proposal Form
2. Schedule of Prices

Each document shall be a properly executed original that is fully compliant in form and content with the specimen documents provided in this RFP.

Federal Goods and Services Tax Excluded

All taxes and duties, except Federal Goods and Services Tax (GST) which shall be excluded, will be included by Proponents in the Item Prices and the computation of the Contract Price. The Ministry will not pay any GST or any amount for reimbursement of GST under the Contract. Taxes already announced before the submission date for Proposals and due to come into force during the Contract are to be included by the Proponents in the Item Prices, and the computation of the Contract Price.

1.5.3 Technical Proposal Requirements

The purpose of the Technical Proposal is for the Proponent to demonstrate to the Ministry that they have carefully considered the requirements of the Work and the constraints thereon and have developed the design and construction planning to the point where they can demonstrate its constructibility.

The Technical Proposal shall be contained in one or more packages each clearly marked "Technical Proposal" and clearly labelled to identify the number of packages comprising the whole Technical Proposal and the Proponent's name.

Each of the ten (10) complete and identical copies of the Technical Proposal should be loose-leaf or in 3-ring binder(s) on single sided 8.5" x 11" paper. Where practical, text should be 1.5" spaced and not smaller than 11-point typeface.

The Technical Proposal shall also be submitted on CD in Microsoft Office and AutoCad ver. 14 compatible format.

1.5.3.1 Project Management Plan

The objective of this component is to evaluate the effectiveness, experience and skills of the Contractor's Team members for the delivery of the Project through the Design/Build process.

In the RFQ, Proponents submitted the organization and structure for the Team and described the key members and individuals. Changes may have been made to the Team as a result of the requirements contained in this RFP or knowledge gained during the Proposal response process.

For the RFP, the Proponent's Team will be evaluated with respect to the following:

a) Key Personnel

- Roles and responsibilities of key personnel; and
- Experience and expertise of proposed key personnel.

b) Core Team Organization/Structure

- Effective Team organization;
- Roles and responsibilities of Team members;
- Organization structure; and
- Lines of responsibility and reporting relationships.

The proposed Project Management Plan will conform to the requirements defined in this RFP and will address all Work required to be performed to satisfy the Contractor's obligations, duties and responsibilities for the Project. Proponents are to describe the lines of responsibility and reporting relationships within the organization.

If deviations are proposed from the organization presented in response to the RFQ in terms of changes in Core Team composition and replacement of nominated individuals, the Proponent will clearly identify these and provide a reasonable explanation for all such changes and provide resumes for such nominated individuals.

The Proponent shall provide a plan showing intended staffing levels and trades or professional designations, projected monthly human resources curve and an equipment list for each stage of the Work.

c) Core Team

Identify the personnel who will be directly responsible for each of the functions as described below:

- Contractor's Project Manager;
- bridge and structural design;
- roadway design;
- geotechnical design;
- pavement design*;
- utility design*;
- electrical design*;
- traffic engineering*;
- construction manager(s);
- quality manager;
- road safety*;
- construction safety manager*;
- environmental management; and
- traffic management.

* Noted positions are in addition to those identified in the RFQ.

The Proponent may, if they wish, nominate any individual to more than one (1) Core Team position.

The Project Management Plan is to describe the roles and responsibilities for the Team and Team members. Provide a description of Work and the roles and responsibilities of sub-contracted construction organizations.

The Project Management Plan is a stand alone document for evaluation; therefore, information provided elsewhere in the RFP should be restated and updated to best reflect the expertise of the Proponent's Team.

d) Coordination

Provide a description of the Proponent's plan to integrate subcontracted activities into its Project scheduling and reporting systems. Include a description of how the Proponent will approach re-scheduling of its own and subcontractor's activities to achieve recovery of the schedule if required, and how the Proponent enforces this approach with its subcontractors.

1.5.3.2 Technical Reports

The following Technical Reports are to be submitted as part of the Technical Proposal. All technical reports shall conform to the requirements of this RFP.

The Technical Reports will be evaluated to ascertain if the Proponent has demonstrated an understanding of the technical requirements and has developed a concept design that will comply with those requirements.

a) Highway Design Report

The Proponent shall provide a detailed road design report, reflecting the requirements of the Design Criteria and Performance Specifications.

- a brief description of the design methods, standards used and supporting analysis. A description of how construction staging requirements for the construction of the major road components, the major structures and all ancillary works have been incorporated in the Proposal;
- design criteria tables for each affected roadway. The tables will show "Standard" and "Achieved" design criteria values;
- a traffic analysis to verify and confirm laning and geometry, and to confirm that the design accommodates present and future (2025) projected design hour volumes;
- a description of the road safety audit process including:
  - Identification of the "safety audit team" and evidence that the team contains the necessary expertise,
  - Details of the road safety audit process confirming the stages of the Project at which the audit(s) will be performed, and
  - Description of the methods the road safety audit team will use;
- identification of the major and outstanding traffic issues associated with this project including:
  - access management
  - other issues

The minimum requirements for drawings to accompany the highway design report are as follow:

- key plan;
- plans, showing all alignments with curve data, top of cuts and toe of fills, retaining walls, concrete barriers, energy attenuation devices, fencing, and pavement edges. These drawings should show any significant removals and adjustments (culverts, manholes, utilities, structures, pavement, etc.). Include all right-of-way lines;
- profiles for each affected roadway, including vertical alignment data;
- typical sections for each major road component;
- geometrics and laning drawings. These drawings should show any "urban" features, such as curb & gutter, sidewalks, median barriers and islands, etc.;
- conceptual drawings showing utility conflicts and relocation proposals;

All plan, profile and geometric drawings are to be continuous with match lines, as required, set at an even 20 m station. All details are to be trimmed at the match lines on each individual sheet.

b) Structural Design Report

A separate Structural Report shall be submitted for each bridge structure, with a span of greater than 3 m, and each retaining wall to be constructed or modified as part of the Project. These may include but not be limited to the following features:

- Montizambert Creek
- Strip Creek
- Newman Creek
- Lonetree Creek
- Charles Creek
- Highway 99 at Ansell Place

As a minimum, the Structural Reports shall provide the following information:

- Brief description of design methodology
- General Arrangement Drawing for the structure in accordance with the Ministry Manual of Bridge Standards and Procedures. This drawings should show details of "horizontal" and "vertical" geometry including type of structure, structure depth, vertical clearance, horizontal clearance, span arrangement, lane arrangement, total length, deck joint location and type etc.
- Brief description of the type of structure, material and proposed span arrangement and bearing/span fixity
- Outline of actions proposed to satisfy the conditions of the Navigable Waters Protection Act documents and approval
- Describe seismic load path and details
- Describe aesthetic considerations and improvements including span arrangements, facia girder lines, deck overhang appearance, abutment wall and pier treatment, architectural detailing, and surface finishes
- A description of the type of soil, preliminary recommendation as to type of foundation, (spread and/or piled footings) and respective elevations, factored bearing capacities. Dewatering schemes (if applicable), stability conditions for approach fills and any other recommendations specific to the structure under construction
- Environmental issues to be dealt with
- Description of the proposed construction strategy including accessibility requirements, strategy for shipment of structural components, and erection schemes
- Identification of utilities attached to or in conflict with the structure
- Description of the hydrologic and hydraulic requirements of the proposed crossing (scour protection, rip-rap protection, etc.)

- Construction staging general arrangement showing the location of temporary concrete barrier(s), detour lane(s) and Work area(s), if required. Identified construction staging is to be in conformance with the Proposed Construction Staging Plan
- Approach to be used in the design of retaining walls including:
  - groundwater and hydraulic issues
  - aesthetics considerations;
  - geotechnical data and considerations
  - drawings, showing extent and cross sections
  - seismic design considerations.

c) Geotechnical Design Report

Geotechnical reports are to be provided for the road alignment and any structures as stated in Schedules C and G. The format of the reports are to follow Technical Bulletin GM9801, "Guidelines for Technical Reports", March 30, 1998.

These reports shall demonstrate the Proponent's understanding of geotechnical conditions, constraints and issues and are to include, but not limited to, the following:

- Summary of the information provided and any additional geotechnical information obtained through other sources;
- Summary of identified geotechnical conditions, constraints, concerns and outstanding issues related to the proposed design concept, including a description of the proposed approach to resolve these concerns and issues;
- An outline of the Proponent's work plan for geotechnical investigation/analyses proposed to address identified geotechnical issues;
- The Proponent's understanding of Acid Rock Drainage/Metals Leaching issues and proposed program to address the issues;
- Summary of identified rock slope design and stabilization issues and a description of the proposed methodology to be used to solve these issues;
- Summary of identified seismic design issues and a description of the proposed approach to resolving these issues.

d) Drainage Design Report

The Drainage Report shall describe the drainage facilities required for the Project identified in the RFP.

As a minimum, the Drainage Report shall provide the following information:

For longitudinal drainage;

- Typical plan drawing and cross-section of proposed pavement and right-of-way drainage system showing type of system and location of drainage system components;
- Catchbasin spacing and drainage area to catchbasin;
- Address groundwater issues;
- Subdrain requirements;
- Description of the construction procedures and proposed staging to be used in conformance with the Proposed Construction Staging Plan, highlighting how construction of drainage structures will be integrated with the overall construction strategy;
- Proposed measures relative to the environment requirements for stormwater quality control facilities.

For transverse drainage:

- Identification of type(s), sizing and configuration of culverts proposed to be used for the transverse water crossings;
- Subdrain requirements;
- Address groundwater issues;
- Description of construction procedures and proposed staging to be used which will conform to the Proposed Construction Staging Plan and the Proposed Environmental Management Plan;
- The timing required to construct each crossing in conformance with the proposed Project Schedule;
- For any proposed pre-cast components, the source of supply and supporting documentation relative to adequacy of design and proven performance in similar applications;
- Proposed measures relative to the requirements for tailed frog mitigation measures.

e) Pavement Report

Pavement Structure and Rehabilitation Design Reports shall be provided for the design of road alignments and any structures as described in Schedules C and G.

These reports shall include, but are not limited to the following:

- Summary of the scope of work for each major road component and structure where work is proposed;
- Summary of any geotechnical concerns and outstanding issues:
- Condition assessment of existing pavements where such pavements are proposed to be incorporated in the new pavement infrastructure;

- Preliminary design details such as criteria, methodology, testing results and recommendations by section;
- Summary of the construction methodology for each major road component and structure where work is proposed;
- Summary of the proposed material sources, quantities, and any outstanding issues such as pit development requirements; and
- Identification of personnel that will be working on this Project during the design and construction phases describing which personnel will be undertaking the design and supervising the design and personnel supervising and reviewing of pavement design issues that may arise during the construction.

1.5.3.3 Project Plans

a) Quality Management System

The Contractor shall develop and implement a Quality Management System (QMS) in accordance with the requirements of ISO 9001:2000 International Standard for Quality Management Systems. Table F-1 in Schedule F shows the relevant sections of the ISO 9001:2000 International Standard.

The Contractor shall be totally responsible for all quality assurance and quality control activities to manage their processes, including design, and those of their sub-contractors and suppliers. The Ministry shall conduct scheduled quality audits throughout the design, construction, substantial completion and completion stages of the Project to verify that the Contractor's Quality Management System is functioning correctly.

The scope of the Quality Management System and the description of the processes and documented procedures required for its implementation shall be documented in a Quality Manual. The Contractor shall submit with their proposal, a copy of their company Quality Manual outlining their Quality Management System. If the current version of the Contractor's Quality Manual does not meet these requirements, the Contractor shall provide an outline of how they intend to develop and implement such a system on this Project.

In addition to the above, the Contractor shall submit, with their Proposal, a specific example of how they intend to incorporate the quality control and quality assurance requirements presently contained in the material, work methodology and end product MoT Standard Specifications for Highway Construction, 2004 Edition, into their own inspection and testing planning process. The purpose of this example is to demonstrate that the Contractor has a clear understanding of the transfer of responsibility for the quality assurance functions that were previously performed by the Ministry.

b) Construction Methodology

The Proponent shall provide a detailed plan outlining how the Work will be carried out to meet the Ministry's requirements as set out in this RFP.

Note the requirement regarding the Substantial Completion date and milestones as described in Schedule D, Project Time Schedule and SP1.09.

Issues that the Proponent shall address in this section of the Technical Proposal shall include, but not be limited to, the following areas:

- Key issues and constraints affecting construction
- Proposed construction methodologies and work procedures
- Construction sequencing and strategy, including:
    - Work headings
    - Temporary works
    - Temporary facilities
    - Survey and layout
    - Procurement of fixed plant
    - Sources and handling of bulk materials
    - Disposal and storage of surplus materials
    - Seasonal considerations
    - Access issues and equipment
    - Human resources management.

This list is not intended to be exhaustive. Proponents are encouraged to provide any further information as considered necessary or innovative.

c) Traffic Management Plan

The Proponent shall submit an outline of their Traffic Management Plan as part of their Proposal submissions, which will be closely assessed in the proposal evaluation process. The plan outline that the Proponent shall submit as part of their Proposal shall include the following:

- The sequencing and duration of various stages of work;
- Plans showing the staging of construction, location and size of work zone for each construction stage;
- Customized control plans that addresses stage-specific activities and requirements, such as lane configuration and widths, and placement of traffic control devices and Traffic Control Persons;
- Plans for detours, if any, showing lane configuration, lane widths, and placement of traffic control devices;

- Accesses or intersections affected by the work zone and provisions to maintain accesses/intersections at each stage;
- Details and durations of proposed traffic stoppages;
- The location of vehicle storage areas where traffic stoppages are proposed;
- Location of hazard areas created by road geometry or local geography (ie. rock fall hazard zones);
- The traffic volumes to be managed and maintained; and
- Confirmation that the Project Schedule will be achieved while complying with the Traffic Management Criteria in this RFP.
- The experience and qualifications of the named Traffic Manager and/or Traffic Control Supervisor

d) Environmental Management Plan

The Proponent shall submit a summary Environmental Management Plan that shall demonstrate the Proponent's understanding, commitment and ability to manage and address the requirements of the protection of the environment as described in this RFP.

The summary plan shall contain the following information as a minimum:

- A description of the formal Environmental Management Plan that the Proponent shall put in place to ensure the delivery of construction in accordance with the requirements set out in this RFP. The description shall include all processes, procedures, resources and sequence of tasks that the Proponent will use in its construction activities to address environmental issues. The plan shall be of sufficient detail to permit the assessment of the impacts of the construction on environmentally sensitive areas as required in the Environmental Assessment Certificate;
- The Proponent should be aware that:
  - Before work commences on site and within 10 working days of award of Contract, the Contractor shall submit a detailed Environmental Management Plan to the Ministry Representative for review and approval by the Ministry for compliance with the requirements described in the RFP;
  - The Contractor shall revise the Environmental Management Plan and maintain it as a live document throughout the duration of the Project;
- Identification of the Proponent's environmental management team members who will be responsible for environmental management and monitoring services, including their credentials, in the Human Resources and Equipment Utilization Plan.

e) Construction and User Safety Program

The Proponent shall describe the key elements of its proposed Construction Safety Plan.

This Plan shall identify any safety issues relating to Construction Site personnel, visitors to the Site, and members of the public that may be affected by the implementation of the Project and describe the measures that will be used to manage these safety issues. The Plan shall satisfy the requirements of Schedule I, Construction Site Safety.

f) Construction Schedule

Preliminary Contract Schedule

The Proponent shall submit a preliminary schedule for the design, construction and commissioning of the Work. The schedule shall be in a time-scaled CPM network diagram format and shall include all the tasks representing the design and construction of the major elements of the Work, the key milestones, the direction of work and the logical interdependencies between the tasks and the milestones.

The Preliminary Contract Schedule shall form the basis for the Contract Schedule.

1.6 PROPOSAL EVALUATION – OVERVIEW

1.6.1 Disqualification

The Ministry is not bound to award or enter into a Contract with any Proponent, including without limitation, with the highest rated Proponent. The Ministry reserves the right, in its sole and absolute discretion, to reject any or all Proposals, and further reserves the right to re-issue this RFP or any other request for proposals for the same or similar Work at any time and from time to time.

If any Proposal is obscure, or contains a defect, or fails in some way to comply with any term of this RFP which, in the sole discretion of the Ministry, is not material, then the Ministry may waive the obscurity, defect, or non-compliance and accept and evaluate the Proposal, as submitted, or the Ministry may request that the Proponent clarify or rectify such obscurity, defect or non-compliance before the Ministry will further consider the Proposal.

The determination of:

a) materiality;

b) whether or not to

    (i) disqualify any Proposal

    (ii) waive any obscurity, defect, or failure to comply;

    (iii) require Rectification; and

c) the adequacy and acceptability of any clarification or rectification submitted by a Proponent,

is in the sole discretion of the Ministry. The Ministry will not be bound by industry custom or practice in the exercise of its discretion.

1.6.2 Consideration of Revisions

If the Ministry, in its sole discretion, considers any Revision or any part of a Revision to be unclear or ambiguous as to meaning or intent, or to not substantially comply with any terms of this RFP, that Revision or that part of the Revision shall, in the sole discretion of the Ministry, either be considered by the Ministry to be valid and the meaning given to it by the Ministry shall be binding on the Proponent; or considered by the Ministry to be invalid and such Revision will be disregarded by the Ministry and will not be applied or considered by the Ministry in connection with the Proponent's Proposal.

If any Revision or any part of a Revision is considered by the Ministry to be invalid, the Proposal and any valid Revision[s], or valid parts of Revision[s], shall continue to be binding on the Proponent.

1.6.3 Evaluation Committee

Evaluation of Proposals will be conducted by a committee formed by the Ministry and may include representatives of government agencies and private sector firms and advisors.

In carrying out the Proposal evaluations and related activities, the evaluation committee may, in confidence, obtain and rely upon any technical, managerial, and other input and direction from any person, including without limitation, Ministry officials and private sector firms, to aid them in discharging these functions.

1.6.4 Clarification

As part of the Proposal evaluation process, the Ministry may, in its sole discretion, request clarifications and additional information from any Proponent after the Closing Time and for that purpose may enter into separate and confidential discussions with individual Proponents. The Ministry has no obligation whatsoever to have such discussions with all Proponents or to provide any or all Proponents with the same questions.

1.6.5 Presentation

At any time or times during the evaluation process prior to opening the Price Envelopes, as part of the Proposal evaluation process, the Ministry may, in its sole discretion, call on any Proponent, including their nominated Project Manager, to participate in an "in person" or conference call presentation, including a question and answer session, on any aspect of their Proposal. The

Ministry has no obligation whatsoever to call on all Proponents to make such a presentation or to provide any or all Proponents with the same questions.

1.6.6 Conflict of Interest and Restricted Parties

Any Proposal may be disqualified, at the Ministry's sole discretion, if the current or past corporate or other interests of any person named in the Proposal might, in the Ministry's sole opinion, give rise to an actual, potential or perceived conflict of interest in connection with the Work, and if a suitably qualified alternative person can not be nominated by the Proponent within five (5) days of being notified by the Ministry of the potential disqualification of the Proposal due to the perceived, actual, or potential conflict of interest.

1.6.6.1 Restricted Parties

Restricted Parties:

1. Are not eligible to advise any Respondent in regards to this RFP; and
2. Must not participate as an employee, advisor, consultant or member of any Proponent.

The Ministry may, at its sole and absolute discretion, disqualify a Proponent who uses in any manner or who includes in their Proposal, a Restricted Party. The onus is on the Proponent to ensure that it does not use or include any Restricted Party.

Who Are Restricted Parties

Restricted Parties are those persons (including their former and current employees) who had or currently have participation or involvement in the planning or implementation of the Sunset Beach to Lions Bay Design/Build, and who may provide a material unfair advantage or confidential information to a Proponent that is not, or would not reasonably be expected to be, available to other Proponents. Government employees (current or former) who have been involved in the planning and implementation of the Sunset Beach to Lions Bay Design/Build may also be Restricted Parties.

At this RFP stage, the Ministry has identified the following persons and companies as Restricted Parties because of their direct and recent or current involvement in the Selection Process or the planning or implementation of the Project:

- SNC-Lavalin
- CH2M HILL
- KPMG
- Associated Engineering
- Golder Associates

- Collings Johnston
- Kirk and Company Consulting
- James Hoggan and Associates

This is not an exhaustive list of Restricted Parties. Additional Persons may be added to the list at any stage of the Selection Process. Neither the Ministry nor any of its employees, advisors and representatives is liable to any Proponent for any Claims, whether for costs or preparation of the Proposal, loss of anticipated profit, loss of opportunity or any other matter whatsoever, for any use or reliance on this list or use or inclusion of Restricted Parties in any Proposal.

Appointment of Adjudicator

The Ministry has appointed an Adjudicator to make decisions on conflict of interest or unfair advantage including whether any Person is a Restricted Party. The decisions of the Adjudicator on any conflict of interest or unfair advantage issue, whether on a request for advance rulings or on a request by the evaluation committee at any stage of the evaluation process, is final and binding on the person(s) requesting the ruling, all Proponents and the Ministry.

Requests for Advance Rulings Encouraged

A Proponent or a prospective member or advisor of a Proponent who has any concerns regarding whether a current or prospective employee, advisor or member of that Proponent is or may be a Restricted Party, is encouraged to request an advance ruling to avoid is potential disqualification.

Ministry may Request Advance Rulings

The Ministry may also independently ask for advance rulings where it identifies Persons who may be Restricted Parties. The Ministry will, if it seeks an advance ruling, provide the Adjudicator with relevant information in its possession about the participation of the Person in the Project or other circumstances that may render such Person a Restricted Party. The Ministry will give notice to the possible Restricted Party so that it can make its own submission to the Adjudicator.

1.6.7 Core Team Substitution

The knowledge, skills, and abilities of the individuals named Core Team members in the Proponent's RFQ Response were material to the Proponent being Shortlisted for this RFP.

Proponents will be permitted to nominate substitute Core Team members at their own risk. It shall be the Proponent's sole responsibility to provide sufficient information in their Proposal to satisfy the Ministry that the knowledge, skills, and abilities of each substitute Core Team member are, in the sole opinion of the Ministry, equal or superior to the knowledge, skills, and ability of the individual nominated to that position in the Proponent's RFQ Response. Any Proposal may be disqualified, at the Ministry's sole discretion, if this requirement is not met.

1.6.8 Debriefing

At the conclusion of the Proposal evaluation process, all Proponents will be notified of the results. Any Proponent may request a confidential debriefing with the Ministry.

1.6.9 Proposal Evaluation – Sequence

1.6.9.1 Transmittal Package Evaluation (Step 1)

Transmittal Packages shall be opened and evaluated to determine whether each Proponent has, in the sole opinion of the Ministry, met all Transmittal Package Requirements

Proposals which fail this evaluation shall be subject to disqualification at the sole discretion of the Ministry.

1.6.9.2 Technical Proposal Pass / Fail Evaluation (Step 2)

Technical Proposals shall be opened and subject to an initial pass / fail evaluation to determine whether each Proponent has, in the sole opinion of the Ministry, consistently demonstrated an overall approach which is considered by the Ministry, in its sole discretion, to meet the purpose, intent, and the terms of this RFP.

Proposals which fail this evaluation shall be subject to disqualification at the sole discretion of the Ministry.

The Ministry will not award Rated Criteria points for any of the components of the Technical Proposal.

1.6.9.3 Price Envelope Evaluation (Step 3)

All Price Envelopes shall remain sealed until the Step 2 Technical Proposal Pass/Fail Evaluations have been finalized and documented by the Ministry.

After the Closing Time, Proponents shall not be permitted to change, supplement, or clarify any information provided in or omitted from the Schedule of Prices or any Revision to the Schedule of Prices, without the written permission of the Ministry.

The Item Prices and Contract Price calculated by the Ministry in accordance with this RFP shall be deemed to be the basis of the Proponent's offer and shall be binding on the Proponent.

Points for Contract Price will not be allocated.

The Proposal with the lowest Contract Price shall be deemed to be the Preferred Proposal.

Once the Preferred Proposal has been identified, the Ministry may enter into discussions with that Proponent to clarify any outstanding issues and to identify and finalize those portions of the Proposal, including negotiation of any changes, that shall form part of the Agreement.

If the Ministry determines, in its sole discretion, that discussions are unsuccessful, the Ministry may, in its sole discretion, enter into discussions with the next lowest Contract Price, cancel this RFP process, or elect to not award a Contract.

1.6.10 Evaluation Matrix

STEP 1 TRANSMITTAL PACKAGE EVALUATION	YES	NO
Proposal received from Qualified Proponent		
Proposal received at Closing Location prior to Closing Time		
Proposal Cover Letter		
Proposal Form included		
Proposal Security included		
Consent of Surety		
Insurance undertakings included		
Sealed Price Envelope included		
Ten (10) copies of Technical Proposal included		

A "NO" on any Administrative Requirement shall result in a Proposal being subject to Disqualification.

STEP 2 TECHNICAL PROPOSAL PASS / FAIL EVALUATION	PASS	FAIL
Project Management Plan (Clause 1.5.3.1)		
Technical Design Reports (Clause 1.5.3.2) (Highway, Structural, Geotechnical, Drainage, Pavement)		
Quality Management System (Clause 1.5.3.3 a)		
Construction Methodology (Clause 1.5.3.3 b)		
Construction Schedule (Clause 1.5.3.3 f)		
Traffic Management Plan (Clause 1.5.3.3 c)		
Environmental Management Plan (Clause 1.5.3.3 d)		
Construction and User Safety Program (Clause 1.5.3.3 e)		

A "FAIL" shall result in a Proposal being subject to Disqualification.

Price Envelopes shall remain sealed until Step 2 has been completed.

STEP 3 PRICE ENVELOPE EVALUATION	Contract Price

For details, refer to the RFP Sections as referenced above.

These are the only factors which shall be used to evaluate proposals.

1.7.1 Specimen Proposal Cover Letter

Respondent's Letterhead or name and address

Date

Attention: Maria Ciarnello
Ministry of Transportation
5A, 940 Blanshard Street
Victoria, British Columbia
V8W 9T5

RE: Request for Proposals
Sunset Beach to Lions Bay – Design / Build

I, the undersigned, acting as agent for the Proponent named below, declare the following to be true:

1) the Proponent is a duly organized, validly existing, legal entity lawfully entitled to carry on business in British Columbia and fully legally authorized, licensed and permitted to perform the work contemplated in this Request for Proposals (RFP) with the power and capacity to enter into an agreement in the Ministry.
2) I/we have obtained, carefully read, and understood the entire RFP, including any and all Addenda issued by the Ministry through your office.
3) I/we agree to all the terms and conditions of the RFP, including any and all Addenda issued by the Ministry through your office.
4) The enclosed Proposal is submitted in response to the RFP;
5) I/we agree to be bound by all offers, statements, and representations made in this Proposal.
6) This Proposal is irrevocable for sixty (60) days from the Closing Time.
7) Having full knowledge and understanding of the contents of the RFP Package for the above Project; the locality of the Work; the condition of the Site; the nature and scope of the Work required, I/we hereby offer to:
    a) execute an Agreement substantially in the form included in the RFP;
    b) supply all labour, tools, materials and other resources as necessary to complete and perform the Work described in the Agreement for the above Project, except such materials as may be specified therein to be furnished by the Ministry;
    c) complete all Work in strict accordance with the plans, specifications, terms and conditions contained in the Agreement to the satisfaction of the Ministry;
    d) provide the performance security and insurance in accordance with the Agreement;
    e) achieve Substantial Completion in accordance with the Time Schedule; and
    f) achieve completion of all Work in accordance with the Time Schedule.

Legal name of Respondent: ______________________________

Signature of agent: ______________________ Date: ______________

Name of agent: ______________________ Title: ______________

Telephone: ______________________ Facsimile: ______________

Email: ______________________________

1.7.2 Specimen Irrevocable Letter of Credit

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA AS REPRESENTED BY THE MINISTER OF TRANSPORTATION
(The Beneficiary)
IRREVOCABLE LETTER OF CREDIT
In reference to

Proposal for: **Sunset Beach to Lions Bay – Design / Build**

At the request of: ______________________________
(Full name of Customer)

we, ______________________________
(the Issuer)

do hereby issue this Irrevocable Letter of Credit to guarantee payment on demand to the Beneficiary on the following Terms and Conditions:

1) This Irrevocable Letter of Credit becomes effective immediately and shall remain in effect until at least noon on the31st day of July 2004.

2) Presentation of sign drafts or letters of demand for payment to be made against this Irrevocable Letter of Credit shall be at the discretion of the Beneficiary without requirement of further documentation, notice or prejudice to the rights of any party.

3) We shall honour any demand(s) for payment signed by an Assistant Deputy Minister of Transportation, your representative, without inquiring as to whether you have the right as between yourselves and our said customer to make such a demand and without recognizing any claim(s) of our said customer or any other party.

4) Presentation for payment may be made at our offices located ______________ in the City of **Vancouver, British Columbia, Canada**.

5) Payment(s) shall be made payable to the Minister of Finance and shall be in the amount(s) specified by your representative, but shall not in the aggregate exceed **$200,000.00 (two hundred thousand Canadian dollars)**.

6) We convenant to hold the Beneficiary, its employees, agents, and representatives safe from any and all claims for costs or damages which may arise out of any act, error or omission related to the handling, storage or presentation of this Irrevocable Letter of Credit. #

Unless otherwise stated this credit is subject to the Uniform Customs and Practice for Documentary Credits 1993 Revision, I.C.C. Publication Number 500

Executed under Seal, this __________ day of __________________, 2004

SEAL

Signature for the Issuer

Countersigned

1.7.3 Specimen Consent of Surety

DATE: **NO.:**

WHEREAS ____ has submitted a written proposal to HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA AS REPRESENTED BY THE MINISTER OF TRANSPORTATION as Obligee dated ________________________, 2004, concerning the **Sunset Beach to Lions Bay – Design / Build** and the condition of the obligation being such that the Principal shall have their proposal accepted within 90 days from the Closing Time of the Request for Proposals, we, ______________________________ (Name of Surety), a corporation created and existing under the laws of Canada and duly authorized to transact the business of Suretyship in Canada as Surety, agree to issue for the Principal, if the Principal shall enter into a written contract with the Obligee, the following bonds:

1. A contract performance bond for (50%) of the contract price that are consistent with the terms and conditions of the specimen bonds included in the Request for Proposals.
2. A labour and material payment bond for (50%) of the contract price that are consistent with the terms and conditions of the specimen bonds included in the Request for Proposals.

This consent shall be null and void unless an application for the said bonds is made within thirty (30) days following the award of the contract.

(Name of Surety)

______________________________(Seal)

____
Attorney – In – Fact

1.7.4 Specimen Insurance Undertaking

TO: MINISTRY OF TRANSPORTATION

UNDERTAKING OF GENERAL LIABILITY INSURANCE

We, the undersigned, as authorized representative on behalf of ______________________________ (NAME OF INSURANCE COMPANY) do hereby undertake and agree to provide the insurance as specified in the Insurance and Bonding Requirements for the **Sunset Beach to Lions Bay – Design / Build** if a contract is awarded to __________________________ (NAME OF CONTRACTOR).

We further undertake to provide to the Ministry of Transportation, signed, certified copies of such policy(s) and attached endorsements within fourteen (14) days after the date the Agreement is awarded and prior to commencement of any work on the Project.

Dated at: ______________________________

This ________ day of ________________, 200__.

SIGNED: ____

Duly Authorized Representative of Insurance Company

1.7.5 BC Ministry of Transportation Proposal Form

Proposal for the Sunset Beach to Lions Bay – Design / Build

I/We the undersigned, in accordance with the RFP General Conditions, having full knowledge and understanding of the contents of the RFP for the above Project; the locality of the Work; the condition of the Site; the nature and scope of the Work required, hereby submit our Proposal and offer to:

a) execute an Agreement substantially in the forms anticipated by the RFP;

b) accept all risk of completing the design and construction of the Work in a manner that will meet or exceed all requirements of the Agreement, to the satisfaction of the Ministry;

c) supply all labour, tools, materials, and other resources as necessary to complete and perform the Work described in the Agreement for the above Project, except such materials as may be specified in the Agreement to be furnished by the Ministry; and

d) provide the performance securities and insurance in accordance with the Agreement

for the Contract Price as calculated by the Ministry in accordance with the RFP General Conditions.

I/We acknowledge and irrevocably agree that the Contract Price includes full and final payment for all costs related to the completion of the Work, including but not limited to all fees, cash allowances, contingencies, and taxes, except as otherwise provided in the Agreement.

I/we acknowledge that I/we are not aware of any issue, action, or decision of the Ministry or any conflict of interest, real, potential, or perceived, that would give rise to any claim of unfairness or dispute with respect to this Proposal, that now exists.

I/We furnish herewith Proposal Security in accordance with the RFP General Conditions. I/We agree that the Proposal Security may be forfeit in whole or in part if, in the opinion of the Ministry, I/we fail to comply with the RFP General Conditions or fail to enter into the Agreement.

This offer is irrevocable for sixty (60) days from the Closing Time.

Capitalized terms are defined in the Glossary of Terms forming a part of the RFP.

Name of Proponent: ______________________________

Business Address: ______________________________

Telephone: ____________________ Facsimile: ____________________

This ______ day of ____________, 2004

____
Signature of Authorized Representative

____
Signature of Witness

____
Print or type name of Authorized Representative

1.7.6 Schedule of Prices

ITEM NO.	DESCRIPTION OF PROPOSAL ITEM	ITEM PRICE
1.	Project Initiation [Maximum 4% of GMP]	
2.	Detailed Design [Maximum 4% of GMP]	
3.	Mobilization to Site [Maximum 2% of GMP]	
4.	Type A Excavation	
5.	Type D Excavation	
6.	Offsite Material Disposal	
7.	Median Retaining Walls	
8.	Downslope Retaining Walls	
9.	Upslope Retaining Walls	
10.	Charles Creek Bridge	
11.	Other Bridge Work	
12.	Utilities	
13.	Ansell Place Interchange Bridge and Ramps	
14.	Quality Management	
15.	Traffic Management	
16.	Lighting and Electrical	
17.	Gravels, Paving, Line Painting, and Barriers	
18.	Landscaping	
19.	Demobilization & Completion Documentation [Minimum 2% of GMP]	
	CONTRACT PRICE	
	Provisional Sum	$1,000,000.00
	MAXIMUM AMOUNT PAYABLE	

The Contract Price, being the sum of the Item Prices shown above, as calculated by the Ministry, represents full and final compensation by the Ministry for satisfactory performance of all Work necessary to complete the project.

NAME OF PROPONENT

Proponent's Authorized Signatory Date

Name and Position of Authorized Signatory

BRITISH
COLUMBIA

MINISTRY OF TRANSPORTATION

Design/Build Agreement

BETWEEN:

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA,
as represented by the Minister of Transportation (the "Ministry")

AND

THE DESIGN-BUILDER
(the "Design-Builder") as identified on the execution page of this document

WITNESSES THAT WHEREAS

A. the Ministry has requested proposals for the Design and Construction of the Project in accordance with the terms of a Request for Proposals;

B. the Design-Builder has submitted a Proposal for the Design and Construction of the Project;

C. the Design-Builder has offered to perform the Work, including Design, Construction and all coordination and management necessary to properly implement the Design and Construction of the Project in accordance with this Agreement at a price not greater than the Contract Price and on the terms and conditions set out in this Agreement; and

D. the Ministry has accepted the offer by the Design-Builder to perform the Work at a price not greater than the Contract Price and on the terms and conditions herein set out.

NOW THEREFORE the Ministry and the Design-Builder agree as follows:

DB 1. CAPITALIZED TERMS AND SCHEDULES

DB 1.01 A capitalized term, when used herein, shall have the meaning set out in the Glossary of Terms forming part of this Agreement.

DB 1.02 The following Schedules form an integral part of this Agreement:

(a) Glossary of Terms

(b) Time Schedule

(c) Insurance Specifications and Bonding Requirements

(d) Referee Services Agreement

(e) Reference Documents;

(f) Schedule of Payment Adjustments

(g) Required/Standard Forms

(h) Schedule of Prices;

(i) Project Scope and Performance (including relevant portions of the Request for Proposals as amended by Addenda, if any) ***[Project specific information]***

- Scope of Work
- Design Criteria and Performance Specifications ***[includes Standard Specifications]***
- Ministry Supplied Materials and Services
- Site Plans and Site Information;

(j) Technical Reports and Plans

Management Plans

Technical Reports

Project Plans

Key Personnel / Employees

[include all Project specific relevant parts of Proposal as amended by negotiations including Design-Builder commitments.]

DB 2. DESIGN-BUILDER'S REPRESENTATIONS, AND WARRANTIES

DB 2.01 The Design-Builder represents and warrants to the Ministry that:

(i) in the case of a limited company, the Design-Builder is a corporation within the meaning of the ***Company Act***, duly organized and validly existing and legally entitled to carry on business in British Columbia and fully legally authorized, licensed and permitted to perform the Work;

(ii) the Design-Builder has the power and capacity to enter into this Agreement and to comply with every term and condition in this Agreement;

(iii) all necessary proceedings have been taken to authorize the execution and delivery of this Agreement by the Design-Builder;

(iv) this Agreement has been properly executed by the Design-Builder and is enforceable against the Design-Builder in accordance with its terms;

(v) any statement, representation, or information, whether oral or written, made, furnished, or given by the Design-Builder's directors, officers or agents, the Design-Builder Manager or the Design-Builder Representative(s) to the Ministry in connection with this Agreement is materially correct and accurate;

(vi) the Design-Builder has no knowledge of any fact that materially adversely affects or, so far as it can foresee, might materially adversely affect either its financial condition or its ability to fulfill its obligations under this Agreement;

(vii) there is no bona fide proceeding pending or threatened against the Design-Builder, which would, if successful, materially adversely affect the ability of the Design-Builder to fulfill its obligations under this Agreement;

(viii) the Design-Builder has filed all tax, corporate information, and other returns required to be filed by the laws of British Columbia and Canada, has complied with all workers compensation legislation and other similar legislation to which it is subject, and has paid all taxes, fees, and assessments due by the Design-Builder under those laws as of the date of this Agreement;

(ix) the Design-Builder is not in breach of any law, by-law, or regulation that is material to performance of the Design-Builder's obligations under this Agreement;

(x) the Design-Builder holds all permits, licences, consents, and authorities issued by any level of government or any agency of government, that are required by law to conduct its business;

(xi) the Design-Builder pays punctually as they become due, all accounts, expenses, wages, salaries, taxes, rates, fees, and assessments required to be paid by it on any of its undertakings;

(xii) the Design-Builder has investigated and satisfied itself of every condition affecting the Work, including, but not limited to, the Design requirements, Site conditions, and the labour and material to be provided;

(xiii) the Design-Builder's investigation has been based on its own examination, knowledge, information, and judgement and not upon any statement, representation, or information made or given by the Ministry other than the information provided in this Agreement, subject to any qualifications or conditions set out in this Agreement; and

(xiv) the key personnel and employees identified by the Design-Builder in its Proposal will be available and fully involved in the performance of the Work.

DB 2.02 The Design-Builder acknowledges and agrees that:

(i) the investigations made by the Ministry of the conditions of the Site including subsurface conditions are of a preliminary nature and are made for the purpose of study and preliminary design and may not be sufficient or representative of anticipated or actual conditions at the Site;

(ii) the Design-Builder has satisfied itself and agrees that all Reference Documents and any other documents and material provided by the Ministry are relevant to the Project;

(iii) the Design-Builder has had sufficient time to investigate and satisfy itself of all conditions affecting the Project that the Design-Builder considers appropriate, necessary or relevant and the Design-Builder acknowledges and agrees that any conclusions reached in its investigation are based on its own examination, knowledge, information and judgement other than the Reference Documents and not upon any statement, representation or information produced or provided by the Ministry or its advisors;

(iv) it accepts all risk of completing the Work in a manner that will meet or exceed, in the sole opinion of the Ministry, all requirements of this Agreement;

(v) it has the responsibility for informing itself of all aspects of the Project and all information necessary to perform the Work; and

(vi) it will carry out the Work substantially in accordance with the representations contained in each of the Management Plans, Technical Reports and Plans and with those key personnel and employees identified in the Proposal as it may be amended and included as Schedules to the Agreement submitted by the Design-Builder to the Ministry.

DB 2.03 All representations and warranties and all documents delivered by or on behalf of the Design-Builder are material and the Ministry has relied on them, notwithstanding any prior or subsequent investigation by the Ministry.

DB 2.04 **DB 2.01 and DB 2.03** continue in force until the End Date, notwithstanding the fulfillment by the Design-Builder of any of its obligations under this Agreement or payment by the Ministry to the Design-Builder of any of the monies due to the Design-Builder pursuant to this Agreement.

DB 3. TERM

DB 3.01 With the exception of provisions which are expressly stated to survive the expiry of the Term, this Agreement is effective for the period commencing on the date of Award and ending on the End Date.

DB 3.02 The End Date shall be the date that all of the following conditions are fulfilled:

(i) the Design-Builder and the Ministry have performed all obligations required under this Agreement;

(ii) the Completion Certificate has been issued in accordance with **DB 36.06**; and

(iii) the Design-Builder has fulfilled all its obligations pursuant to **Article 39.00**.

DB 4. MINISTRY APPOINTMENTS

DB 4.01 The Ministry shall appoint a Ministry Manager, with full authority to interpret this Agreement on behalf of the Ministry, to act on behalf of and to legally bind the Ministry in connection with the Work and this Agreement.

DB 4.02 The Ministry Manager shall appoint one or more Ministry Representatives, as the Ministry considers appropriate for the Design and Construction, who shall be entitled to inspect and evaluate, on behalf of the Ministry, the quality, quantity, suitability, and progress of the performance of the Work.

DB 4.03 Notwithstanding any other provision of this Agreement, the Ministry Manager and the Ministry Representative(s) and any other representative of the Ministry, in executing their obligations under this Agreement, may obtain technical, managerial, and other input and direction, to aid them in reaching any decision mandated of them.

DB 4.04 The Ministry may change the Ministry Manager or Ministry Representative(s) at any time and shall provide written notice to the Design-Builder of the appointments and of any changes to the appointments.

DB 5. DESIGNATED REPRESENTATIVES OF THE DESIGN-BUILDER

DB 5.01 The Design-Builder shall appoint a Design-Builder Manager, with full authority, as agent of the Design-Builder, to act on behalf of and legally bind the Design-Builder in connection with the Work and this Agreement.

DB 5.02 The Design-Builder shall appoint one or more Design-Builder Representatives, as the Design-Builder considers appropriate for the Design and the Construction, with full authority to supervise the Work and to accept instructions from the Ministry Representative, and shall ensure that the appropriate Design-Builder Representative is available at all times to the Ministry Representatives or Ministry Manager.

DB 5.03 The Design-Builder Representative(s) responsible for Construction shall remain on Site during all active periods of Construction for which they have been appointed.

DB 5.04 The Design-Builder shall provide the Ministry with written notice of these appointments and shall not change any of the designated personnel, employees or representatives specified in this **Article** or those personnel set out in Schedule **XXX** of the Agreement as Designers, unless the proposed replacement person is acceptable to the Ministry Manager.

DB 6. HOLDBACK

DB 6.01 Subject to **DB 6.02**, the Ministry shall retain from each progress payment a holdback equal to five percent (5%) of the amount approved by the Ministry Representative for payment by the Ministry to the Design-Builder (the "Holdback").

DB 6.02 The Ministry may, in the sole discretion of the Ministry, accept from the Design-Builder a substitute security, in a form and content satisfactory to the Ministry, in place of the Holdback, in which case the substitute security is deemed to be the Holdback.

DB 6.03 The Design-Builder irrevocably grants the Ministry the right to claim against or call upon the Holdback and, without limitation, set-off, out of any money due or payable at any time to the Design-Builder by the Ministry, in order to recover any overpayment to the Design-Builder or to recover any other sums which are due and payable to the Ministry by the Design-Builder in connection with this Agreement.

DB 6.04 The Ministry will not pay interest or other charges on any amounts retained pursuant to **DB 6.01or DB 6.02**.

DB 7. BONDS AND INSURANCE

DB 7.01 The Design-Builder shall comply with the bonding requirements and Insurance Specifications of this Agreement as set out in Schedule A, and pay for and maintain the Bonds and insurance in force during the Term.

DB 7.02 If the Surety notifies either party that the Bonds are or are going to be terminated or cancelled for any reason whatsoever, the Design-Builder shall obtain and provide the Ministry with valid Bonds effective from the date of termination of the Bonds, which comply with the bonding requirements of this Agreement.

DB 8. THIRD PARTY CONSENTS TO CHANGES

DB 8.01 The Ministry may require the Design-Builder to obtain the written consent of the insurer or Surety or both to any Work Order.

DB 8.02 The Design-Builder shall notify its Surety and insurer of any event or circumstances, including but not limited to a change to the Scope of Work, or change to the Time Schedule that could result in such event or circumstances not being covered under the Bonds or insurance and update its Bonds or insurance coverage accordingly.

DB 8.03 If an issuing company notifies either party that they decline consent or coverage for any Work Order change to Scope of Work or Supplemental Agreement, the Design-Builder shall obtain and provide the Ministry Manager with valid additional Bonds or insurance, satisfactory to the Ministry Manager and complying with bonding requirements and Insurance Specifications as set out in Schedule A covering the Work specified in the Work Order or Supplemental Agreement, which comply with this Agreement.

DB 9. NOTICE OF LIABILITY AND PROPERTY INSURANCE CLAIMS

DB 9.01 In addition to any obligation the Design-Builder may have to notify any insurer or insurers or any regulatory agency, the Design-Builder shall give written notice to the Ministry Representative, and to the Ministry (care of the Manager, Claims, Ministry of Transportation, PO Box 9850, Stn Prov Govt, Victoria, B.C., V8W 9T5) or such other address as the Ministry may from time to time direct in writing:

(i) of any accident or occurrence during occupation of the Site by the Design-Builder until the issuance of the Completion Certificate, enclosing pertinent details of the accident or occurrence, within **seven days** from the date on which the accident or occurrence arises or occurs;

(ii) any professional liability or errors and omissions claims; and

(iii) within **14 days** following final disposition of any accident, occurrence, or claim enclosing pertinent details.

DB 10. INDEMNITY

DB 10.01 The Design-Builder shall assume the defence of and shall indemnify and save harmless the Ministry, its agents and employees, from and against all claims, liabilities, demands, losses, damages, costs and expenses, fines, penalties, assessments and levies made against or incurred, suffered or sustained by the Ministry, its agents and employees, or any of them at any time or times before or after the completion of the Term or earlier termination of the Agreement where the same or any of them are based upon or arise out of or from anything done or omitted to be done by the Design-Builder, its employees, agents, Designers or Subcontractors, in connection with the Design, Agreement or the Work, which indemnity shall survive the completion or earlier termination of the Agreement.

DB 10.02 Notwithstanding the obligation of the Design-Builder to assume the defense of any claims under **DB 10.01**, the Ministry may retain its own counsel to represent it, and the Design-Builder shall reimburse the Ministry for the actual cost of that counsel including all fees and disbursements.

DB 10.03 The obligations of the Design-Builder under **Article 10.00** shall not be affected by completion or termination of this Agreement, whether for default or otherwise, or suspension of the Work or any withdrawal of services or labour from the Project.

DB 11. LEGAL RELATIONSHIP

DB 11.01 The Design-Builder is an independent Design-Builder and not the servant, employee, partner, or agent of the Ministry.

DB 11.02 The Design-Builder shall not commit the Ministry to the payment of any money to any person.

DB 11.03 No partnership, joint venture, or agency involving the Ministry is created by this Agreement or under this Agreement.

DB 11.04 All personnel engaged by the Design-Builder to design and construct the Project are at all times the employees or Subcontractors of the Design-Builder and not of the Ministry. The Design-Builder is solely responsible for all matters arising out of the relationship of employer and employee.

DB 12. ASSIGNMENT AND SUBCONTRACTING

DB 12.01 For each Subcontractor involved in the Construction with a Subcontract having a value of $25,000 or more, the Design-Builder shall provide a complete copy of the Subcontract, including the legal name and address and full descriptions of that portion of the Work that each such Subcontractor is to undertake and severing the numeric portion of the pricing information in that Subcontract only at the Design-Builder's option, to the Ministry Manager prior to the Subcontractor performing any of the Work. All Subcontracts shall be substantially in the form of the latest edition of:

(i) the B.C. Road Builders and Heavy Construction Association Standard Form of Construction Contract Between Contractor and Subcontractor; or

(ii) the Canadian Standard Construction Subcontract (Long Version) CCA L-1 or CCA S-1 (Short Version); or

(iii) the BCCA 200 Construction Subcontract.

DB 12.02 The Design-Builder shall make copies of the labour and materials payment Bond available to each Subcontractor and shall post and maintain copies of the labour and materials payment Bond at the Site.

DB 12.03 The Design-Builder shall ensure every Subcontractor observes the terms of this Agreement so far as they apply to that portion of the Work to be performed by that Subcontractor. The Design-Builder will ensure that the terms of this Agreement that are applicable to the portion of the Work to be performed by a Subcontractor will form part of that Subcontract.

DB 12.04 For greater certainty, the Design-Builder shall ensure every Subcontract, standard purchase order agreement, and standard hired equipment rental agreement contains the following provisions:

(i) the parties hereto shall immediately notify the Design-Builder in writing of any dispute which remains unresolved for a period of **30 days** or more.

(ii) the parties shall negotiate in good faith to resolve all disputes and provide frank, candid and timely disclosures of relevant information and documentation in their possession to the other party; and

(iii) all disputes which have not been resolved within **45 days** after the delivery of the notice to the Design-Builder shall be referred to and finally resolved by a single arbitrator following the rules of the British Columbia International Commercial Arbitration Centre, administered in accordance with the "Domestic Commercial Arbitration Rules of Procedure".

DB 12.05 The Design-Builder shall ensure every Subcontract, standard purchase order agreement, and standard hired equipment rental agreement for Designers, Subcontractors and Suppliers require such Designers, Subcontractors and Suppliers, where requested by the Ministry or the Design-Builder, to attend any dispute resolution process pursuant to this Agreement.

DB 12.06 Nothing in this Agreement creates any contractual relationship between the Ministry and any Subcontractor.

DB 12.07 Payment of any sums by the Ministry to the Design-Builder, and those sums paid by the Design-Builder to any Subcontractor, and those sums paid by any Subcontractor to another Subcontractor on account of the Contract Price are and constitute a trust fund in the hands of the Design-Builder or of the Subcontractor, as the case may be, pursuant to the ***Builder's Lien Act***

DB 13. DESIGNATED SUBCONTRACTORS AND SUPPLIERS

DB 13.01 The Design-Builder must complete the "List of Designated Subcontractors and Designated Suppliers" form, included in the required/standard forms appendix, and submit this form to the Ministry Representative, within **thirty days** of Award.

DB 13.02 Prior to a Designated Subcontractor or Designated Supplier performing any portion of the Work at the Site, the Design-Builder shall deliver to the Ministry Representative, a copy of each Designated Subcontractor's or Designated Supplier's Subcontract stating:

(i) that a written Subcontract as described in **DB 12.01** exists;

(ii) the total value of the Subcontract; and

(iii) the scope of the Work being subcontracted.

DB 13.03 The Design-Builder shall ensure that each Subcontract with a Designated Subcontractor or Designated Supplier contains a requirement that the Designated Subcontractor or Designated Supplier provide a performance bond and labour and materials payment bond each in the amount as specified in **DB 13.05**, as a part of that Subcontract.

DB 13.04 Prior to the Design-Builder allowing a Designated Subcontractor or Designated Supplier to perform any Work on the Site, the Design-Builder shall ensure that:

(i) a performance bond and a labour and materials payment bond which meet the requirements of **DB 13.05** are in place;

(ii) copies of the bonds referenced in **DB 13.05** are provided to the Ministry Representative; and

(iii) a copy of the labour and materials payment bond is securely and visibly posted and maintained at the Site.

DB 13.05 The Design-Builder shall ensure that each of the performance bond, and the labour and materials payment bond for each Designated Subcontractor or Designated Supplier:

(i) is in an amount of not less than **50%** of each Subcontract;

(ii) is maintained in force during the term of the Subcontract;

(iii) is validly executed by both the Surety and the Designated Subcontractor or Designated Supplier;

(iv) shows the business address of the Surety for filing of claims and delivery of notices; and

(v) remains posted at the Site during the term of the Subcontract.

DB 13.06 If the Ministry becomes aware that a Designated Subcontractor or Designated Supplier is performing a Work activity on the Site but such Designated Subcontractor or Designated Supplier is not in compliance with **DB 13.04 or DB 13.05**, the Ministry Representative may issue a Stop Work Order for that Work activity. The Stop Work Order shall remain in effect until the Design-Builder brings itself into compliance with **DB 13.04 and DB 13.05**.

DB 13.07 The Design-Builder shall not be entitled to any compensation including, without limitation, an Extension of Time or compensation for Reimbursable Delay in connection with or as a result of a Stop Work Order under **DB 13.06** and shall accelerate that portion of the Work as necessary to ensure that the Time Schedule is maintained and met.

DB 13.08 The Design-Builder shall provide written notification to the Ministry Representative, for:

(i) any change to or addition of a Designated Subcontractor or Designated Supplier; and

(ii) any material change to the scope of work for a Designated Subcontractor or Designated Supplier.

DB 14. COMPLIANCE WITH LAW

DB 14.01 The Design-Builder shall:

(i) comply with all laws, by-laws, regulations, and codes that may affect or relate to the Work;

(ii) obtain, at the Design-Builder's expense, all licences, permits and approvals (except those specified herein as required to be obtained by the Ministry) required by law for the Work; and

(iii) ensure that the Design and Construction of the Work conforms to all applicable codes, laws, by-laws, and regulations in force relating to the Work.

DB 15. PROSECUTION OF THE WORK

DB 15.01 The Design-Builder shall execute the Work in a continuous and diligent manner, and perform all its obligations in accordance with the Time Schedule;

DB 15.02 Unless otherwise stated in this Agreement, the Design-Builder may prosecute the Work at the times, in the order of procedure, and in the manner and method that the Design-Builder considers appropriate.

DB 15.03 Before commencing Work , the Design-Builder shall:

(i) purchase and deliver the Bonds to the Ministry Manager;

(ii) file with the Ministry originals or certified copies of all insurance policies and necessary endorsements to comply with the requirements of the Agreement; and

(iii) confirm to the Ministry Manager the names of the Design-Builder Manager and Design-Builder Representative(s), as appointed under **Article 5.00**.

DB 15.04 The Design-Builder shall propose a Site Occupation Date, for the approval of the Ministry Manager, a minimum of **30 days** prior to the proposed date.

DB 15.05 The Design-Builder shall not perform any Construction on Site prior to the approved Site Occupation Date.

DB 15.06 The Design-Builder may be authorized, at the discretion of the Ministry Manager, to perform limited investigative and preparatory activities on Site prior to the Site Occupation Date.

DB 16. PROJECT MANAGEMENT AND SUPERVISION

DB 16.01 The Design-Builder shall undertake all management, coordination and supervision necessary to properly perform the Work.

DB 17. DESIGN RESPONSIBILITY

DB 17.01 The Design-Builder shall ensure that the Design is performed by, or under the supervision of, those Designers listed in the Proposal.

DB 17.02 The Design-Builder shall control the Design and shall be responsible for the means, methods, techniques, sequences and procedures necessary to properly complete the Design in accordance with the Time Schedule.

DB 17.03 The Design-Builder:

(i) shall ensure that the Work and the Design is fit and suitable for the intended purpose of the Project, as set out in this Agreement, and

(ii) acknowledges and agrees that it has the non-delegable duty and obligation to the Ministry to complete the Work, including the Design in a manner that is fit and suitable for the intended purpose of the Project, as set out in this Agreement.

DB 17.04 The Design-Builder shall make any revisions to the Design as may reasonably be required from time to time by the Ministry, including changes resulting from Changes To Work and changes resulting from a Work Order or Supplemental Agreement.

DB 17.05 The Design-Builder shall ensure that all portions of the Design are prepared under the direction of, and where appropriate by, Designers who are professional engineers or other such professionals as appropriate to the nature of the Design, lawfully authorized to practice within British Columbia.

DB 17.06 The Design-Builder shall provide the Ministry Manager with certificates from the Designers that the Design has been fully reviewed and checked, and complies with all applicable codes, standards, laws, by-laws, and regulations.

DB 17.07 Any review, audit or monitoring of the Work by the Ministry does not diminish the Design-Builder's responsibility for ensuring that the Work is fit and suitable for the intended purpose of the Project, as anticipated by this Agreement.

DB 18. INVESTIGATION

DB 18.01 Before commencing any Design, the Design-Builder shall carry out its own investigations sufficient to satisfy itself regarding all matters relating to and all requirements of the Project, the Work, the Site and this Agreement.

DB 19. DESIGN SCHEDULE

DB 19.01 Prior to the release of the first progress payment, the Design-Builder shall provide the Ministry Representative with a Design Schedule, satisfactory to the Ministry Representative, that describes the anticipated timing of the major design activities in sufficient detail to demonstrate that the Design will be performed in accordance with the Time Schedule.

DB 19.02 The Ministry Representative may, at any time, and from time to time, request that the Design-Builder submits an updated Design Schedule.

DB 19.03 As a condition of the release of each progress payments except the first, the Design-Builder shall provide the Ministry Representative with an updated Design Schedule within **14 days** of the request.

DB 20. DESIGN REVIEW

DB 20.01 Before commencing any Construction, the Design-Builder shall submit to the Ministry Representative the applicable portion of the Design necessary to that part of the Construction.

DB 20.02 Within **14 days**, the Ministry shall review the portion of the Design submitted by the Design-Builder and the Ministry Representative shall advise the Design-Builder in writing that the submitted Design and design information:

(i) appears to be in general conformance with the intended purpose of the Project as anticipated by this Agreement;

(ii) appears to contain deficiencies or inconsistencies; or

(iii) is, in the opinion of the Ministry, insufficient for the purposes of a review.

DB 20.03 If the Ministry identifies any apparent deficiencies or inconsistencies in the Design, the Design-Builder shall:

(i) provide further information necessary to demonstrate to the satisfaction of the Ministry that the Design does not contain deficiencies; or

(ii) revise the Design, taking into consideration the apparent deficiencies or inconsistencies identified by the Ministry, and submit the revised Design to the Ministry Representative for review in accordance with **DB 20.02**.

DB 20.04 If the Ministry advises the Design-Builder that the information provided is insufficient for the purposes of a review, the Design-Builder shall submit further information, satisfactory to the Ministry, for review by the Ministry in accordance with **DB 20.02**.

DB 21. DESIGN PART OF AGREEMENT

DB 21.01 When the Ministry advises the Design-Builder that it has reviewed and it appears that a portion of the Design is in general conformance with the intended purpose of the Project as set out in this Agreement, that portion of the Design so reviewed shall form an obligation of the Design-Builder under this Agreement.

DB 22. ERRORS IN DESIGN

DB 22.01 The Design-Builder is responsible for all errors, omissions, or deficiencies in the Design despite any review by the Ministry.

DB 22.02 The Design-Builder shall give written notice to the Ministry Representative immediately upon becoming aware of any error, omission, or deficiency in the Design.

DB 22.03 The Design-Builder shall remedy at its own cost, to its own satisfaction and to the satisfaction of the Ministry, any error, omission, or deficiency in the Design, including without limitation any resulting error, omission or deficiency in the Design that result in defects or deficiencies in any part of the Construction that has been commenced or completed.

DB 23. CONSTRUCTION

DB 23.01 The Design-Builder shall supervise, undertake, prosecute, and complete all Construction necessary to complete the Project.

DB 23.02 Unless specifically authorized in writing by the Ministry Manager, the Design-Builder shall not commence Construction of any portion of the Work until that portion of the Design is incorporated into this Agreement, in accordance with **DB 21.01**.

DB 24. SITE SAFETY

DB 24.01 The Design-Builder shall be the specified "prime contractor" for the Site and shall bear the responsibilities of the position under **Workers' Compensation Board Occupational Health & Safety Regulation 296/97.**

DB 24.02 The Design-Builder shall coordinate safety for the Site for all activities performed by its workers as well as those of Subcontractors, utilities, Suppliers, inspectors, the Ministry, and all other parties performing activities on the Site.

DB 24.03 The Design-Builder shall inform the Workers' Compensation Board, all workers on the Site, the public, all agencies, utilities, and other parties concerned with Site safety, of the Design-Builder's role as "prime contractor.

DB 25. CONTAMINANTS

DB 25.01 Before the Site Occupancy Date, the Ministry shall:

(i) take all reasonable steps to determine whether any Contaminants are present at the Site;

(ii) provide the Design-Builder with a written list of any such Contaminants which the Ministry determines at that time to be present at the Site; and

(iii) be responsible for disposing of, storing, or otherwise remediating or rendering harmless any Contaminants present at the Site as is determined to be necessary by the Ministry, unless such Work is designated in the Agreement to be performed by the Design-Builder. The Ministry and the Design-Builder shall take all reasonable steps to ensure that no person suffers injury, sickness, or death and that no property is injured or destroyed as a result of exposure to, or the presence of Contaminants which were at the Site prior to the actual Site Occupation Date.

DB 25.02 The Ministry shall be responsible for disposing of, storing or otherwise rendering harmless any Contaminants present at the Site prior to the actual Site Occupation Date, unless such Work is designated in this Agreement to be performed by the Design-Builder.

DB 25.03 If, after the Site Occupancy Date, the Design-Builder:

(i) encounters Contaminants at the Site, beyond those designated as part of the Work; or

(ii) has reasonable grounds to believe that Contaminants are present at the Site, which were not disclosed by the Ministry as required under **DB 25.01(ii)**,

the Design-Builder shall take all reasonable steps, including stopping Construction, to ensure that no person suffers injury, sickness, or death and that no property is injured or destroyed as a result of exposure to or the presence of Contaminants, and immediately report the circumstances to the Ministry Manager in writing.

DB 25.04 If the Design-Builder is delayed in performing the Work or incurs additional costs as a result of taking steps required under **DB 25.03**, the Ministry shall extend the Completion Date by the number of days equal to the "critical path" delay as demonstrated by the Design-Builder, to the satisfaction of the Ministry Manager, and the Ministry shall reimburse the Design-Builder for reasonable costs the Ministry determines to have been reasonably incurred as a result of the delay and as a result of taking those steps.

DB 26. UTILITIES

DB 26.01 The Design-Builder shall arrange and coordinate all Utility Relocations with the utility owners.

DB 26.02 The Contract Price shall include the cost of all Utility Relocations necessary to complete the Work, including, without limitation, relocations of pole lines, conduits, gas pipes, oil pipes, water pipes, sewers, and tile lines.

DB 26.03 The Design-Builder is entitled to have Utility Relocations performed at the prices indicated in the appropriate protocol agreement between the Ministry and the utility owners, and shall notify the utility owners accordingly.

DB 26.04 The Ministry shall pay for any Utility Relocation costs billed to the Ministry, and the Ministry shall reduce any payments due the Design-Builder under this Agreement by the amount so paid by the Ministry.

DB 26.05 The Design-Builder shall preserve and protect all infrastructure on the Site, including that affected by the Utility Relocation referred to in **DB 26.01 and DB 26.02,** and shall assume full responsibility and pay for all damage caused by the Design-Builder during such Utility Relocation.

DB 26.06 The Ministry Representative shall make available to the Design-Builder, upon request by the Design-Builder, all relevant underground utility information that the Ministry has available.

DB 26.07 The Ministry makes no representation or warranty and accepts no responsibility for the completeness, accuracy, sufficiency or relevance of any such information with respect to the infrastructure of the utility owners or municipalities, including without limitation, any underground utility information, or any analysis or interpretation thereof, and any reliance thereon or any use made thereof by the Design-Builder is at the sole risk and expense of the Design-Builder.

DB 26.08 The Design-Builder acknowledges and agrees that it has not relied upon any representation or warranty of the Ministry with respect to the accuracy, sufficiency, relevance or completeness of any information with respect to the underground utility information, including, without limitation, the infrastructure of the utility owners or municipalities

DB 26.09 The Design-Builder shall confirm the location of all utilities and ensure that all of its labour force, employees, Subcontractors, Owner/Operators, and any other workers on the Site:

(i) are made aware of the location of all utilities in connection with the Project and the importance of avoiding damage to those underground utilities; and

(ii) observe all instructions in connection with those utilities issued by the Ministry on behalf of the respective utility owners.

DB 27. COOPERATION OF THE DESIGN-BUILDER

DB 27.01 The Ministry may perform, or retain or permit others to perform other work on or near the Site and may permit public utility owners and others to do work on or near the Site during the progress of the Construction.

DB 27.02 The Design-Builder shall conduct and schedule the Work and co-operate with those other parties so as to cause as little interference as possible with any such other work being carried out.

DB 28. MAINTENANCE OF WORK DURING CONSTRUCTION

DB 28.01 Unless otherwise stated in this Agreement, during the period between the Site Occupation Date and the Actual Substantial Completion Date, the Design-Builder shall maintain all Disturbed Surfaces, in accordance with this Agreement, the Maintenance Specifications, and the Ministry's "Maintenance Manual for Standard Electrical Equipment".

DB 28.02 For all roadways open to the public, the routine winter maintenance activities described in the Maintenance Specifications shall be performed by, and at the cost of, the Ministry's maintenance contractor.

DB 28.03 Notwithstanding **DB 28.02**, where any roadway is a Disturbed Surface and does not have a smooth paved surface, the Design-Builder shall be responsible for the winter maintenance or, at the Ministry's option, for any additional costs of maintenance, as determined by the Ministry Manager, resulting from the actual surface conditions.

DB 28.04 Notwithstanding the issuance of a Letter of Substantial Completion, the Design-Builder shall continue to perform all required maintenance for any aspect of the Site affected by incomplete Work.

DB 28.05 Any Disturbed Feature resulting from Work authorized under **DB 15.06** shall be maintained by the Design-Builder, from the date of disturbance, in accordance with the Maintenance Specifications and the "Maintenance Manual for Standard Electrical Equipment".

DB 28.06 If the Ministry issues a Stop Work Order, the Design-Builder shall continue to maintain the Site pursuant to **DB 28.01 and DB 28.04:**

(i) unless the Stop Work Order states that the reason for the Stop Work Order is a State of Suspension;

(ii) unless the Stop Work Order states that the Ministry Manager has arranged for uninterrupted continuation of maintenance services; and

(iii) until the Design-Builder has brought the Site to a condition approved by the Ministry Representative.

DB 28.07 Notwithstanding the approval of the Ministry Representative pursuant to **DB 28.06(iii)**, the Design-Builder is responsible for remedying any deficiencies in the Work that become apparent during a State of Suspension, and for restoring all things within the Site to a satisfactory condition, as determined by the Ministry Representative, for routine maintenance by the Ministry.

DB 28.08 The Design-Builder shall resume maintenance pursuant to **DB 28.01 and DB 28.04** on the date that the Design-Builder resumes Work pursuant to a Resume Work Order.

DB 28.09 Notwithstanding **DB 28.01 to DB 28.08** and in the discretion of the Ministry Manager, the Design-Builder may be relieved of any or all responsibilities for maintenance with respect to any portion of the Site and improvements.

DB 28.10 Notwithstanding **DB 28.06**, a Stop Work Order establishing a State of Suspension may require the Design-Builder to continue maintenance of any portion of the Work during the State of Suspension.

DB 28.11 The Design-Builder shall give the Ministry Manager a minimum of **30 days** notice of any anticipated transfer, permitted under this Agreement, of any maintenance to the Ministry.

DB 29. STANDARDS

DB 29.01 The Design-Builder shall ensure that finished Work conforms to the requirements, lines, grades, typical cross-sections, and dimensions as determined by the Standards.

DB 29.02 Variances from the Standards may only be authorized in writing by the Ministry Manager.

DB 29.03 Any approval by the Ministry Manager of a variance from the Standards may be contingent upon agreement between the Ministry Manager and the Design-Builder Manager of a revised Warranty Period, in accordance with **DB 39.03**, for the Work covered by the variance.

DB 30. QUALITY MANAGEMENT

DB 30.01 The Design-Builder is responsible for the quality of the Work, and shall perform Quality Control and Quality Assurance in accordance with this Agreement and the Quality Management Plan.

DB 31. AUDIT OR INSPECTION OF THE WORK

DB 31.01 The Ministry may audit the Design-Builder's Quality Management Plan and Quality Control, and Quality Assurance procedures, records and results, and may perform reviews or undertake its own inspection or testing at any time during the Term.

DB 31.02 The Ministry may at any time or times audit or inspect the Work and the materials furnished in respect thereof.

DB 31.03 The Design-Builder shall allow all persons designated by the Ministry Manager access to the Construction at all reasonable times and shall provide all information and assistance required by the Ministry.

DB 31.04 An audit or inspection by the Ministry does not constitute any acceptance of the Work, nor does it relieve the Design-Builder of responsibility or liability for the quality of the Work, or from any obligation to perform the Work in accordance with the requirements of this Agreement.

DB 31.05 The Design-Builder shall cooperate with the Ministry in reviewing the proposed Design, and in sampling, testing, inspection and auditing of the Construction.

DB 31.06 Unless otherwise stated in this Agreement, the Ministry's review, sampling, testing, inspecting and auditing of Design and Construction shall be done at the expense of the Ministry.

DB 31.07 The Design-Builder shall obtain and keep on-Site complete written statements of the origin, composition, and manufacture of any materials supplied by the Design-Builder that are used or are intended to be used in the Work, and shall, if requested, provide such documentation to the Ministry Representative.

DB 31.08 The Design-Builder shall do all things necessary to satisfy the Ministry Representative that the Work is being completed in accordance with this Agreement including, without limitation, removing or uncovering parts of the Construction, and restoring those parts to conform to the requirements of this Agreement.

DB 31.09 If the Ministry Representative is satisfied with the Construction exposed in accordance with **DB 31.08**, the Ministry Manager shall issue a Work Order for the removal, uncovering, and restoration, and the Design-Builder shall be compensated at a negotiated price or on a Force Account Basis.

DB 31.10 If the Ministry Representative determines that any part of the Work fails to conform to the Standards, as determined by the Ministry Representative's inspection, testing, or audit, the Design-Builder shall remove and replace that portion of the Construction in question with Work that, in the opinion of the Ministry, meets the Standards, at the Design-Builder's expense.

DB 32. REVIEW AND INSPECTION OF THE WORK BY OTHER AUTHORITY

DB 32.01 The Design-Builder shall permit access to the Site, and to the Design and the Construction, to persons designated by the Ministry Representative including persons representing other authorities or agencies of government.

DB 32.02 No review, audit, inspection or approval by any other authority, agency, or government shall derogate from or reduce the obligations of the Design-Builder to the Ministry under this Agreement.

DB 33. WORK ORDERS

DB 33.01 The Ministry Manager may issue a Work Order at any time.

DB 33.02 The Ministry Manager shall issue any Work Orders to the Design-Builder Manager or to any other person authorized by the Design-Builder to receive a Work Order.

DB 33.03 Upon issuance of a Work Order, the Design-Builder shall proceed with the Work requested in, and otherwise comply with, the Work Order.

DB 33.04 The Ministry may, at any time, require the Design-Builder to assess the impact of a proposed Work Order on the Contract Price and the Time Schedule.

DB 33.05 The Design-Builder is not entitled to additional payment, or any adjustment to the Contract Price, for any Work performed pursuant to a Work Order, unless provision for such payment is included in the Work Order.

DB 33.06 The Design-Builder shall comply immediately with a Stop Work Order, whether issued by the Ministry Manager or the Ministry Representative, and shall not resume the Work specified in the Stop Work Order until authorized to do so in writing by the Ministry Manager.

DB 33.07 During a State of Suspension, notwithstanding receipt of a Stop Work Order, the Design-Builder shall carry out any Work specified in a Work Order.

DB 34. EMERGENCY WORK

DB 34.01 The Ministry Representative may designate Emergency Work.

DB 34.02 Notwithstanding any other provisions in this Agreement, the Ministry Representative may direct the Design-Builder to use any equipment, material, and labour force on the Site in any manner and to perform any activities the Ministry Representative considers to be Emergency Work and the Design-Builder shall promptly perform that Emergency Work.

DB 34.03 Where in the opinion of the Ministry Representative the Emergency Work falls within the Design-Builder's responsibilities under the Agreement, or where the Ministry Representative determines that such Emergency Work arose as a result of:

(i) an event within the control of the Design-Builder; or

(ii) any fault, failure, negligence, action or malfeasance on the part of the Design-Builder, then the cost of the Emergency Work, as determined in the opinion of the Ministry Representative, shall be to the Design-Builder's account. In all other cases payment for Emergency Work shall be made at a negotiated price or on a Force Account Basis.

DB 35. SUBSTANTIAL COMPLETION

DB 35.01 Unless otherwise stated in this Agreement, Substantial Completion occurs when all Construction as necessary to facilitate the safe, uninterrupted, and unobstructed public use of all structures, traveled lanes, sidewalks, pathways, and shoulders has been satisfactorily completed, including but not limited to:

(i) paving of all roads;

(ii) all structures and drainage systems;

(iii) full operation of all traffic lighting and signalization;

(iv) all temporary pavement markings, and layout for all permanent pavement markings at all intersections and on all major roads;

(v) installation of all regulatory and guide signing; and

(vi) installation of all median and roadside barrier and other safety devices.

DB 35.02 Upon satisfaction of the conditions in **DB 35.01**, the Design-Builder may submit a written request for a Letter of Substantial Completion to the Ministry Manager with the following documents:

(i) a Statutory Declaration in the form required by the Ministry as appended to this Agreement, attesting that the Design-Builder has performed all of its obligations to date under this Agreement;

(ii) a certificate from the Design-Builder that the Work has been designed in substantial accordance with this Agreement; and

(iii) a certificate from the Designers that the Construction has been performed in substantial accordance with the Agreement, the Design and all codes, by-laws and regulations applicable to the Work.

DB 35.03 Within **seven days** of receipt of such a request, the Ministry Manager shall evaluate the Work, determine whether Substantial Completion has been attained, and issue either:

(i) a deficiency list; or,

(ii) a Letter of Substantial Completion.

DB 35.04 Upon receipt of a deficiency list issued pursuant to **DB 35.03(i)**, the Design-Builder shall remedy all deficiencies noted, and, upon completion of that Work, may re-apply for Substantial Completion in accordance with **DB 35.02**.

DB 35.05 Substantial Completion may be withheld if the Design-Builder is in breach of any provision of this Agreement.

DB 36. COMPLETION

DB 36.01 Completion occurs when the Ministry Manager determines that the Design-Builder has completed all of its obligations, with the exception of those related to the Warranty Period, under this Agreement.

DB 36.02 The Design-Builder may submit a written request for a Completion Certificate.

DB 36.03 Within **seven days** of receipt of such a request, the Ministry Manager shall evaluate the Work, determine whether Completion has been attained, and issue either:

(i) a deficiency list; or

(ii) a notification that the Work has been satisfactorily completed.

DB 36.04 Upon receipt of a deficiency list issued pursuant to **DB 36.03(i)**, the Design-Builder shall remedy all deficiencies noted, and, upon completion of that Work, may re-apply for a Completion Certificate in accordance with **DB 36.02**.

DB 36.05 Upon receipt of a notification pursuant to **DB 36.03(ii)**, the Design-Builder shall submit the following to the Ministry Manager, in a form satisfactory to the Ministry Manager:

(i) a clearance letter from the Workers' Compensation Board indicating that all current assessments due from the Design-Builder have been paid;

(ii) as-built drawings of the Design that properly and fully describe the actual Construction ;

(iii) a Statutory Declaration in the form required by the Ministry as appended to this Agreement, attesting that the Design-Builder has performed all of its obligations to date under this Agreement;

(iv) a certificate from the Design-Builder that the Work has been designed in substantial accordance with this Agreement;

(v) a certificate from the Design-Builder that the Work has been constructed in substantial accordance with the Agreement, the Design and all codes, by-laws and regulations applicable to the Work;

(vi) a certificate from the Design-Builder that all claims and Disputes have been identified and submitted to the Ministry; and

(vii) a certificate from the Designers that the as-built plans for the Design properly and fully describe the actual Construction.

DB 36.06 Upon receipt of the documentation required under **DB 36.05**, the Ministry Manager shall issue the Completion Certificate provided the Design-Builder has paid all monies owing to the Ministry as required under this Agreement.

DB 36.07 Issuance of the Completion Certificate does not relieve the Design-Builder of any of its obligations under this Agreement.

DB 36.08 As of the date of the request for issuance of the Completion Certificate, the Design-Builder expressly waives and releases the Ministry from all claims, proceedings, demands and Disputes against the Ministry in any way arising under or relating to this Agreement including, without limitation, those that might arise from the actions or omissions of the Ministry except:

(i) those made in writing prior to the request of the Design-Builder for a Completion Certificate; and

(ii) those arising from the provisions of **Article 25.00**.

DB 37. INTERIM HOLDBACK RELEASE

DB 37.01 In the sole discretion of the Ministry and subject to the terms and conditions of the Agreement, the Ministry may release, one time only, a portion of the Holdback in accordance with **DB 37.02**, no sooner than the Ministry determines that all of the following conditions have been met:

(i) the Ministry Representative has issued a Letter of Substantial Completion;

(ii) the Contractor has provided to the Ministry a clearance letter from the Workers' Compensation Board indicating that all current assessments due from the Design-Builder have been paid; and

(iii) the Design-Builder has provided to the Ministry the applicable executed statutory declaration as required in the Schedule **XXX** - Statutory Declarations.

DB 37.02 An interim Holdback release shall be in the amount of the Holdback less two times the cost to complete the Work as estimated by the Ministry Representative. This amount shall be retained until such time as the conditions in **DB 38.01** have been satisfied.

DB 37.03 If the Ministry has accepted a substitute form of security pursuant to **DB 6.02**, no portion of the security shall be released until the satisfaction of all conditions in **DB 38.01**.

DB 37.04 In the event of an interim Holdback release, the Ministry shall discontinue retaining Holdbacks from all subsequent progress payments.

DB 38. FINAL HOLDBACK RELEASE

DB 38.01 Subject to the terms and conditions of the Agreement, the Ministry shall release the Holdback, or the remaining balance thereof, within **60 days** following written acknowledgement by the Ministry that all of the following conditions have been satisfied:

(i) the Ministry Representative has issued a Completion Certificate;

(ii) the Design-Builder has provided to the Ministry a clearance letter from the Workers' Compensation Board indicating that all current assessments due from the Design-Builder have been paid;

(iii) the Design-Builder has provided to the Ministry the applicable originally executed statutory declaration as required in the Schedule **XXX** - Statutory Declarations; and

(iv) the Design-Builder has provided to the Ministry:

(a) written confirmation of the final measurement quantities that the Design-Builder accepts; and

(b) written confirmation of the final measurement quantities which the Design-Builder disputes.

DB 39. WARRANTY

DB 39.01 Notwithstanding any other provision of this Agreement, upon Substantial Completion or the earlier termination of this Agreement, the Design-Builder warrants to the Ministry that the Design is free of deficiencies, including those arising from errors and omissions for a Warranty Period of **two years** following the Actual Substantial Completion Date or early termination, all Construction is free of deficiencies.

DB 39.02 The Design-Builder shall, upon receipt of notification by the Ministry, promptly and diligently remedy, at the Design-Builder's expense, any deficiencies identified in the Warranty Period, to the satisfaction of the Ministry.

DB 39.03 The Warranty Period for the whole or any portion of the Work may be varied by a negotiated period when, in accordance with **DB 29.02**, the Ministry Manager approves a variance from the Standards set out in this Agreement.

DB 39.04 For any Work incomplete on the Actual Substantial Completion Date, upon the written notice of the Ministry Manager itemizing any or all of the incomplete Work and requiring a full warranty, the Design-Builder shall provide a **two year** warranty, commencing on the Completion Date, for all such Work identified in the notice.

DB 40. CHANGE TO SCOPE

DB 40.01 A change to the Scope of Work shall only be authorized through a Supplemental Agreement.

DB 40.02 The Ministry may enter into a Supplemental Agreement with the Design-Builder in connection with a change to the Scope of Work if:

(i) the Design-Builder has given written notice to the Ministry Manager, not later than **seven days** after the event giving rise to the request, providing details of the basis of the request, the cost impact, and a revised Time Schedule showing the effect of the event upon the critical path and the Design-Builder's requested compensation; and

(ii) the Ministry Manager, after investigating the conditions, considers that compensation for a change in the Scope of Work is justified and will determine the amount of such compensation.

DB 40.03 A Supplemental Agreement pursuant to **DB 40.01** may, without limitation, do one or more of the following:

(i) adjust the Contract Price;

(ii) adjust the Substantial Completion Date;

(iii) adjust the Completion Date; and

(iv) adjust the Time Schedule.

DB 41. REIMBURSABLE DELAY

DB 41.01 Reimbursable Delay means any material delay in carrying out the Work, which is caused by;

(i) failure of the Ministry to provide access to the Site as reasonably contemplated in the Agreement; or

(ii) third parties, only for the following events:

(a) the establishment by a regulatory authority of an Environmental Window after the Closing Time;

(b) failure by a third party to perform any Utility Relocation or other public works in a timely fashion that was unforeseeable by the Design-Builder;

(c) failure of another Ministry contractor to perform its work in a timely fashion; and

(d) a material change of any applicable law, code, statute or regulation after the Closing Time that, in the opinion of the Ministry, adversely impacts the Work.

DB 41.02 The following events are specifically excluded from the definition of Reimbursable Delay in **DB 41.01**, unless otherwise agreed to in writing by the Ministry Manager:

(i) adverse weather, acts of God, states of emergency or other natural conditions;

(ii) preconsolidation and settlement of embankments;

(iii) failure of the Design-Builder to comply with a Work Order;

(iv) withdrawal of services due to a strike (including, without limitation, illegal work stoppage or slow down), lockout, or other labour dispute, regardless of whether the withdrawal is by a third party;

(v) failure of the Design-Builder to comply with this Agreement;

(vi) failure of the Design-Builder to provide for the safety of the public or of any person carrying out the Work;

(vii) failure of the Design-Builder to protect the property of the Ministry;

(viii) defects in connection with the Project which are caused by the Design-Builder whether or not such defects are being rectified at the time;

(ix) routine quality control or quality assurance testing or auditing of components of the Work for compliance with the Standards;

(x) Utility Relocation, unless caused by a Reimbursable Delay as set out in **DB 41.01**;

(xi) failure of the Design-Builder to secure permits or Governmental Approvals for the Work; and

(xii) failure of the Design-Builder to discharge any responsibility it has for the protection of the environment.

DB 41.03 A Reimbursable Delay ends on the earlier of:

(i) the date on which the Design-Builder becomes aware, or should reasonably have become aware, that the condition or cause of the Reimbursable Delay has been corrected; or

(ii) the date on which the Design-Builder resumes the portion of the Work impacted by the delay.

DB 41.04 The Design-Builder shall use its best efforts to mitigate the costs and impacts of any delay, to curtail and remove the cause of the Reimbursable Delay, and to resume, as soon as possible, performance of its obligations under this Agreement.

DB 42. EXTENSION OF TIME

DB 42.01 If a Reimbursable Delay, or, in the opinion of the Ministry, an event beyond the control of the Design-Builder, or a labour dispute occurs other than a labour dispute that involves the labour force of the Design-Builder or any of its Subcontractors, resulting in an extended duration of any task on the critical path and an expected delay to the Completion Date, the Design-Builder may request an Extension of Time.

DB 42.02 The Design-Builder shall submit any such request for an Extension of Time to the Ministry Manager in writing, not later than **14 days** after the event giving rise to the request, providing details of the basis of the request, a revised Time Schedule showing the effect of the event upon the critical path, and the period of time requested.

DB 42.03 The Ministry Manager shall reply in writing within **14 days** after receiving a request for an Extension of Time, granting or denying the request.

DB 42.04 An Extension of Time shall not be granted if, in the opinion of the Ministry Manager, the request is made in connection with:

(i) environmental conditions, road restrictions, or other conditions, any of which result from normal or expected patterns of occurrence for the Site; or

(ii) an Event of Default.

DB 42.05 An Extension of Time may be granted, in the discretion of the Ministry Manager, if the request is made as a result of:

(i) a delay in the Design-Builder's performance of Work caused by a labour dispute other than a labour dispute that involves the labour force of the Design-Builder or any of its Subcontractors, or a circumstance which, in the opinion of the Ministry Manager, is beyond the Design-Builder's control, provided that the Design-Builder has diligently proceeded with the Work, has mitigated the effect on the Work, and has practically applied all means to complete the Work; or

(ii) previous Extensions of Time which have deferred the Work into periods affected by conditions specified in **DB 42.04(i)** which adversely affect the Design-Builder's ability to perform the Work.

DB 42.06 When the Ministry grants an Extension of Time, the Extension of Time shall be for a period of time that, in the opinion of the Ministry is commensurate with the impact of the delay on the critical path for the Project, as demonstrated by the Design-Builder to the satisfaction of the Ministry Manager, and the Completion Date shall be deemed to be extended by the number of days set out in the Extension of Time.

DB 42.07 Upon any Extension of Time, the Design-Builder shall obtain and deliver to the Ministry Representative, from each Surety and insurance company named in the Bonds or insurance, written consent to the Extension of Time and written confirmation that their respective Bonds or insurance remain in force, or the Design-Builder shall provide replacement Bonds or insurance, in accordance with this Agreement.

DB 42.08 Unless otherwise agreed in writing by the Ministry Manager, no compensation shall be paid to the Design-Builder as a result of an Extension of Time.

DB 43. EARLY OR LATE SUBSTANTIAL COMPLETION DATE

DB 43.01 If the Actual Substantial Completion Date is earlier than the Substantial Completion Date specified in this Agreement, the Ministry shall pay the Design-Builder an additional sum equal to the daily early Substantial Completion incentive value specified in the Schedule of Payment Adjustments multiplied by the number of days between the Substantial Completion Date and the Actual Substantial Completion Date.

DB 43.02 The maximum additional payment arising from **DB 43.01** shall be as specified in the Schedule of Payment Adjustments.

DB 43.03 If the Design-Builder fails to achieve Substantial Completion on or before the Substantial Completion Date, then without limiting any other remedy available to the Ministry, the Ministry Manager may elect to proceed with any of the following:

(i) terminate this Agreement without affecting any of the remedies of the Ministry under this Agreement;

(ii) set-off against amounts owing to the Design-Builder or from the Holdback the amount specified in the Schedule of Payment Adjustments as consideration for late Substantial Completion for each day or part thereof between the specified Substantial Completion Date and the Actual Substantial Completion Date; or

(iii) extend the Substantial Completion Date and, if deemed appropriate by the Ministry Manager, the Completion Date for such periods as the Ministry Manager determines, without requiring the Design-Builder to pay any consideration during such extended time.

DB 43.04 If the Ministry Manager elects to extend the Substantial Completion Date pursuant to **DB 43.03(iii)** and the Design-Builder does not complete the Work on or before the extended Substantial Completion Date then, upon written notice by the Ministry Manager to the Design-Builder, the Ministry may avail itself of any of the remedies specified in **DB 43.03**, or of any other remedy.

DB 43.05 It is a condition of any extension to the Substantial Completion Date pursuant to **DB 43.03(iii)** that the Design-Builder shall proceed diligently to complete the Work. If in the opinion of the Ministry Manager, the Design-Builder is at any time not proceeding diligently to complete the Work, the Ministry Manager may provide **seven days** written notice to the Design-Builder requiring the Design-Builder to proceed with the Work. If the Design-Builder has not, in the opinion of the Ministry Manager, proceeded diligently with the Work during the **seven day** notice period, or at any time thereafter, the Design-Builder shall be deemed to be in default of this Agreement and the Ministry shall have recourse to all its remedies under this Agreement.

DB 44. FAILURE TO MEET COMPLETION DATE

DB 44.01 If the Design-Builder fails to achieve completion of the Project as defined in **DB 36.01** on or before the Completion Date, then without limiting any other remedy available to the Ministry, the Ministry Manager may elect to proceed with any of the following:

(i) terminate this Agreement without affecting any of the remedies of the Ministry under this Agreement;

(ii) set-off against amounts owing to the Design-Builder or from the Holdback the amount specified in the Schedule of Payment Adjustments as consideration for late Completion for each day or part thereof between the specified Completion Date and the Actual Completion Date; or

(iii) extend the Completion Date for such period as the Ministry Manager determines, without requiring the Design-Builder to pay any consideration during such extended time.

DB 44.02 Should the consideration periods associated with **DB 43.03(ii) and DB 44.01(ii)** overlap, the Ministry shall waive the consideration granted in **DB 44.01(ii)** for the overlapping days.

DB 44.03 If the Ministry Manager elects to extend the Completion Date pursuant to **DB 44.01(ii) or DB 44.01(iii)** and the Design-Builder does not complete the Work on or before the extended Completion Date then, upon written notice by the Ministry Manager to the Design-Builder, the Ministry may avail itself of any of the remedies specified in **DB 44.01**, or of any other remedy.

DB 44.04 It is a condition of any extension to the Completion Date pursuant to **DB 44.01** that the Design-Builder shall proceed diligently to complete the Work. If in the opinion of the Ministry Manager, the Design-Builder is at any time not proceeding diligently to complete the Work, the Ministry Manager may provide **seven days** written notice to the Design-Builder requiring the Design-Builder to proceed with the Work. If the Design-Builder has not, in the opinion of the Ministry

Manager, proceeded diligently with the Work during the **seven day** notice period, or at any time thereafter, the Design-Builder shall be deemed to be in default of this Agreement and the Ministry shall have recourse to all its remedies under this Agreement.

DB 45. DEFAULT AND TERMINATION

DB 45.01 Any of the following events is an Event of Default by the Design-Builder whether the event is voluntary, involuntary, or results from the operation of law or any judgment or order of any court, administrative or government body:

(i) in the opinion of the Ministry, the Design-Builder fails to perform any obligation under this Agreement;

(ii) the Design-Builder fails to give notice to the Ministry Manager, specifying particulars, that there has occurred or is continuing a default under this Agreement;

(iii) any representation or warranty made by the Design-Builder in this Agreement is, in the opinion of the Ministry Manager, materially incorrect;

(iv) any information, or document furnished by or on behalf of the Design-Builder to the Ministry in connection with this Agreement is, in the opinion of the Ministry Manager, materially incorrect;

(v) there is any bona fide proceeding pending or threatened against the Design-Builder, which would, in the opinion of the Ministry Manager, if successful, materially adversely affect the ability of the Design-Builder to fulfill its obligations under this Agreement;

(vi) a change occurs with respect to the property or business of the Design-Builder which, in the opinion of the Ministry Manager, materially adversely affects the ability of the Design-Builder to fulfill its obligations under this Agreement;

(vii) an order is made, resolution passed, or petition filed, for the liquidation or winding up of the Design-Builder;

(viii) the Design-Builder becomes insolvent, commits an act of bankruptcy, makes an assignment for the benefit of its creditors, or otherwise acknowledges its insolvency;

(ix) a bankruptcy petition is filed against, or a proposal under the ***Bankruptcy and Insolvency Act*** (**Canada**) is made by, the Design-Builder;

(x) a receiver or receiver-manager of any property of the Design-Builder is appointed;

(xi) the Design-Builder permits any sum pertaining to the Work to remain unpaid, which it does not in good faith dispute to be due from it, after legal proceedings have been commenced to enforce payment thereof;

(xii) the Design-Builder ceases, in the opinion of the Ministry Manager, to carry on business as a going concern; and

(xiii) a floating charge granted by the Design-Builder crystallizes or becomes enforceable or any other action is taken to enforce any charge granted by the Design-Builder.

DB 45.02 On the happening of an Event of Default by the Design-Builder that may be rectified; namely, **DB 45.01 (i), (ii),(v), (vi) and (xi)**, the Ministry Manager may waive the default, or, subject to **DB 45.03 and DB 45.04**, specify in writing a **seven day** Rectification Period within which the Design-Builder shall remedy the Event of Default.

DB 45.03 At any time during the Rectification Period established under **DB 45.02**, the Ministry Manager may, in its discretion, carry out any Work or responsibilities of the Design-Builder under this Agreement and reduce the amount payable to the Design-Builder by the actual cost of the Work performed.

DB 45.04 If the Design-Builder does not remedy an Event of Default that can be remedied; namely, **DB 45.01 (i), (ii),(v), (vi) and (xi)** within the Rectification Period, or in where an Event of Default occurs that cannot be rectified, the Ministry Manager may take one or more of the following actions:

(i) pursue any remedy available to it at law or in equity;

(ii) take all actions in its own name or in the name of the Design-Builder including, without limitation, taking ownership of the Project Material, taking steps, procuring material, equipment, and labour and carrying out any activities that, in the opinion of the Ministry Manager, is reasonably required to rectify the Event of Default;

(iii) by written notice to the Design-Builder suspend the rights and obligations of the Design-Builder under this Agreement, in whole or in part;

(iv) terminate this Agreement by giving the Design-Builder a written notice of termination, whether or not a written notice of suspension has been given under **DB 45.04(iii)** if in the opinion of the Ministry Manager, the Event of Default is not capable of being rectified during a suspension pursuant to **DB 45.04(iii)**;

(v) take over the Work and set-off any costs to complete the Work against the Holdback and any other funds that may be then owing to the Design-Builder under the Agreement; and

(vi) extend the Rectification Period,

or the Ministry Manager may waive the Event of Default in writing and on such conditions as the Ministry Manager may determine.

DB 45.05 If the Ministry Manager takes action, pursuant to **DB 45.03 or DB 45.04**, to remedy the Event of Default:

(i) the Design-Builder shall pay the Ministry on demand for all expenses the Ministry incurs in taking such action; and

(ii) the Ministry may exercise its rights under **DB 6.03.**

DB 45.06 The rights, powers, and remedies conferred on the Ministry under this Agreement are not intended to be exclusive but are cumulative and are in addition to and not in substitution for any other right, power, and remedy existing under this Agreement, under any other agreement, at law, or in equity. The exercise by the Ministry of any right, power, or remedy does not preclude the simultaneous or later exercise by the Ministry of any other right, power, or remedy.

DB 46. TERMINATION FOR REASONS OTHER THAN DEFAULT

DB 46.01 Notwithstanding any other provision of this Agreement, the Ministry Manager may, upon giving **30 days** prior written notice to the Design-Builder, terminate this Agreement.

DB 46.02 Subsequent to receipt of Notice from the Ministry pursuant to **DB 46.01**, the Design-Builder shall only proceed with those portions of the Work specifically authorized in writing by the Ministry Manager during the **30 days**.

DB 46.03 Upon termination of this Agreement in accordance with **DB 46.01**, the Ministry is under no further obligation to the Design-Builder except to pay to the Design-Builder:

(i) the amount the Design-Builder is entitled to for Work satisfactorily completed on the Project to the date of termination; and

(ii) other expenses of the Design-Builder which are, in the opinion of the Ministry Manager, reasonable in the circumstances.

DB 47. TERMINATION BY THE DESIGN-BUILDER

DB 47.01 The Design-Builder may by giving written notice to the Ministry Manager, declare the Ministry in default of this Agreement for any of the following reasons:

(i) the Ministry has failed to pay the Design-Builder within **60 days** of the date that any payment becomes due to the Design-Builder in accordance with the terms of this Agreement, unless the Ministry is bona fide disputing liability to make such payment and has provided notice to the Design-Builder of the basis for its dispute;

(ii) the Ministry has failed to substantially supply the Site to the Design-Builder, subject to any property availability restrictions identified in this Agreement, within **60 days** following the Site Occupation Date proposed by the Design-Builder and accepted by the Ministry in the Time Schedule or otherwise amended pursuant to this Agreement.

DB 47.02 On the happening of an Event of Default by the Ministry, the Design-Builder shall either waive the default or specify in writing a **seven day** Rectification Period within which the Ministry shall remedy the Event of Default.

DB 47.03 If the Ministry fails to remedy the Event of Default within the Rectification Period or any extension thereof established in accordance with **DB 47.02**, the Design-Builder may:

(i) further extend the Rectification Period; or

(ii) terminate this Agreement

within **seven days** of the end of the Rectification Period, or, notwithstanding **DB 69.01**, shall be deemed to have waived the default.

DB 47.04 If the Design-Builder terminates this Agreement in accordance with **DB 47.03(ii)**, the Design-Builder is entitled to be paid:

(i) in accordance with the terms of this Agreement for all Work satisfactorily performed to the date of termination; and

(ii) reasonable costs of termination, as determined by the Ministry, of all of the Design-Builder's obligations to other parties.

DB 48. APPOINTMENT AND COSTS OF THE REFEREE

DB 48.01 Within **30 days** of execution of this Agreement, the parties shall appoint the Referee and, if agreement on the appointment of the Referee cannot be reached, the parties shall request the British Columbia International Commercial Arbitration Centre to appoint the Referee under its procedures for the appointment of an arbitrator.

DB 48.02 The parties shall enter into the Referee Services Agreement, substantially in the form attached to this Agreement.

DB 48.03 The Referee's terms of reference shall be in accordance with the attached Referee Services Agreement.

DB 48.04 Unless the Referee orders otherwise, the Ministry and the Design-Builder shall share equally the cost of, and shall pay the Referee for:

(i) duties performed and responsibilities fulfilled under the Referee Services Agreement; and

(ii) all actual and reasonable disbursements which have been paid by the Referee in order to perform the services and fulfillment their responsibilities.

DB 48.05 The Referee may, at any time, be discharged and replaced by another Referee by mutual consent of the Ministry and the Design-Builder.

DB 49. DISPUTE RESOLUTION

DB 49.01 If a Dispute arises, the Design-Builder shall abide by the Ministry's decision with respect to the Dispute, diligently proceed with the Work, and closely track all costs and impacts associated therewith while reserving its rights to claim or Dispute the instructions or the Ministry's position concerning the Dispute.

DB 49.02 The Ministry and the Design-Builder agree that, both during and after the performance of the Work, each of them shall:

(i) make bona fide efforts to resolve any Dispute arising between them by amicable negotiations; and

(ii) provide frank, candid and timely disclosure of all relevant facts, information and documents to facilitate the resolution of any claim or Dispute.

DB 49.03 In order to facilitate the negotiations in **DB 49.02,** the Design-Builder shall provide full written particulars of the nature, entitlement and magnitude of any claim and any request for an Extension of Time being sought including the following documentation:

(i) a description of the basis for the claim citing the specific provision of this Agreement under which the claim is being brought;

(ii) a list of all equipment on the Site at the time the claim occurred, that was idled;

(iii) a list of any supervisory staff at the Site impacted and details of applicable pay rates,

(iv) a list of equipment operator costs,

(v) the most recent Time Schedule and the impact of the claim on those items on the "critical path", and

(vi) any other documents requested by the Ministry Manager.

DB 49.04 Within **seven days** of a Dispute arising, the Design-Builder Representative or Ministry Representative, as the case may be and provided the Ministry has received all information requested pursuant to **DB 49.02(ii)** and **DB 49.03**, shall give the other party written notice of the Dispute and the parties shall use all reasonable efforts as identified by **DB 49.02** to resolve the Dispute.

DB 49.05 If the Ministry Representative and the Design-Builder Representative fail to resolve the Dispute within **10 days** after receipt of the notice pursuant to **DB 49.04,** the parties shall refer the Dispute to the Ministry Manager and the Design-Builder Manager for resolution.

DB 49.06 If the Ministry Manager and the Design-Builder Manager fail to resolve the Dispute within **10 days** after the Dispute has been referred to them, the Dispute shall be referred to the Referee, as appointed under the terms of **Article 48.00**, for investigation of the facts leading to a non-binding decision.

DB 49.07 Within **seven days** after the referral of the Dispute to the Referee, the Ministry and the Design-Builder shall each submit to the Referee and the other party a complete list of the issues in dispute, the basis for the entitlement to any claim, full information regarding any amount being claimed, the remedies sought, and a list of documents and any other information they believe relevant to the Dispute.

DB 49.08 The Referee may in the course of the investigation:

(i) require either party to supply or prepare for examination by the Referee and the other party, any document or other information the Referee considers necessary;

(ii) inspect the Work, giving reasonable notice to each party of the time when, and the place where, the Referee intends to conduct any inspection;

(iii) convene meetings of the parties to discuss the issues in Dispute in the presence of the Referee; and

(iv) take evidence from such witnesses and experts, as the Referee may deem appropriate, in the presence of the Design-Builder and the Ministry.

DB 49.09 Neither the Ministry nor the Design-Builder shall unduly delay or impede the Referee in completing the investigation.

DB 49.10 The Referee's written decision, with reasons, shall be delivered to the Ministry and the Design-Builder within **14 days** of the Referee's receipt of the parties' information pursuant to **DB 49.07**.

DB 49.11 If a party disputes the referee's decision, that party shall deliver a Protest of Decision to the other party, the Referee, and the British Columbia International Commercial Arbitration Centre within **14 days** of receipt of the Referee's written decision.

DB 49.12 A Protest of Decision shall set out the nature of the Dispute, the circumstances which gave rise to the Dispute, the date on which these circumstances arose, and the date of the notice of Dispute issued in accordance with **DB 49.04**.

DB 49.13 In the absence of the filing of a Protest of Decision within the time specified in **DB 49.11**, the Referee's decision shall become binding on both parties.

DB 49.14 Any Dispute which is the subject of a Protest of Decision, or which is not otherwise resolved by the Referee, shall be referred to a single arbitrator and finally resolved by binding arbitration under the rules of the British Columbia International Commercial Arbitration Centre in effect at the time of the Protest of Decision.

DB 49.15 The arbitrator shall be chosen by mutual agreement between the Design-Builder and the Ministry. If an arbitrator has not been appointed within **14 days** of receipt of the Protest of Decision, the arbitrator shall be appointed by the British Columbia International Commercial Arbitration Centre.

DB 49.16 The protesting party shall provide copies of the Protest of Decision, the notice of Dispute and the Referee's decision to the arbitrator immediately upon the arbitrator's appointment.

DB 49.17 Any of the times specified in this Article may be varied by mutual agreement between the Design-Builder Manager and the Ministry Manager.

DB 49.18 Pursuit of the resolution of a Dispute under any part of this Article does not relieve either party of its responsibility to ensure timely performance of its obligations under this Agreement.

DB 49.19 The Design-Builder shall immediately notify the Ministry Representative of any notice received of any dispute involving a Subcontractor whether or not the Ministry is directly involved in the dispute. The Design-Builder shall provide to the parties involved in the dispute, any documents or other information in the possession of the Design-Builder which might reasonably assist the parties in resolving the dispute.

DB 50. PAYMENT

DB 50.01 The Ministry shall pay the Design-Builder the Contract Price, as adjusted in accordance with this Agreement, for performing the Work, and the Design-Builder agrees to accept the Contract Price as full payment and reimbursement to the Design-Builder for all costs incurred for the Design and Construction including labour, materials, equipment, and overhead required to perform the Work.

DB 50.02 The Design-Builder shall invoice the Ministry not more frequently than monthly, in arrears, for the percentage of Work completed for each Item, in strict accordance with the Schedule of Prices, and any applicable Work Orders.

DB 50.03 Payment for the Work, or any portion of the Work, is subject to the invoiced Work having been completed to the satisfaction of the Ministry Manager.

DB 50.04 The Ministry Manager may, within **14 days** of receipt of the Design-Builder's invoice, adjust the amount of any payment to reflect the Ministry Manager's estimate of Work satisfactorily performed as of the date of the invoice.

DB 50.05 Provided the Design-Builder is not in default under any provision in this Agreement, the Ministry shall pay the Design-Builder within **30** of the Ministry Manager accepting and adjusting, where necessary, the Design-Builder's invoice.

DB 50.06 Set-offs made in accordance with **DB 43.03(ii), DB 44.01(ii),** or any other provision of this Agreement may be made from any funds due to or retained from the Design-Builder, at any time after the failure to perform by the specified date, notwithstanding that the actual performance date has not come to pass.

DB 50.07 The payment adjustments in **DB 43.03(ii)**, **DB 44.01(ii)** relate directly to the performance of the Design-Builder of a condition, covenant, or promise in this Agreement and shall not be construed by the parties as punitive but as a genuine pre-estimate and assessment, by mutual consent, of the minimum damages caused by the failure or neglect.

DB 50.08 Notwithstanding payments pursuant to this Article, the Design-Builder is responsible for performing the Work in accordance with this Agreement. The Design-Builder acknowledges that payments do not represent a final evaluation or acceptance of the Work by the Ministry.

DB 50.09 The Ministry is not obligated to pay for Unacceptable Work or Unauthorized Work.

DB 51. CONTRACT PRICE

DB 51.01 The Contract Price for the Project is as stated in the Schedule of Prices.

DB 51.02 Notwithstanding any other provision in this Agreement, no participation by the Ministry, or any person on behalf of the Ministry, shall give rise to a change in the Contract Price unless it has been set out in a Work Order or Supplemental Agreement signed by the Ministry Manager.

DB 52. FORCE ACCOUNT

DB 52.01 When this Agreement provides for payment on a Force Account Basis, the Contract Price shall be adjusted accordingly and such payment shall represent complete payment for all costs and impacts, without limitation, for the Work to be paid on a Force Account Basis.

DB 52.02 The Design-Builder shall not be entitled to compensation for any Force Account Basis Work performed prior to written authorization of the Work from the Ministry Manager.

DB 52.03 Notwithstanding any other provision of this Agreement, any Work done on a Force Account Basis shall be compensated using straight-time wages only, without any overtime premium, unless overtime is agreed to in advance by the Ministry Manager.

DB 52.04 Payment for equipment shall include additional compensation for attachments only when those attachments are specifically required, in the opinion of the Ministry Representative, for the performance of the Work done on a Force Account Basis.

DB 52.05 Payment to the Design-Builder on a Force Account Basis shall be computed as follows:

(i) **for the cost of labour:**

an amount equal to the actual wages and salaries, plus payroll burden, food and lodging, paid or incurred directly by the Design-Builder or any Subcontractor in respect of labour and for supervisory personnel actively and necessarily engaged on the particular item of Work, if supported by recorded time and hourly rates of pay for that labour and supervision; an amount for small tool allowance; and any other similar items which the Ministry Manager considers appropriate,

but not including any payment or costs incurred for operators of Owner/Operator Equipment, costs for general supervision, administration, or management time spent on the item of Work;

(ii) **for overhead and profit**: an amount equal to **20%** of the total costs referred to in **DB 52.05(i)** to cover Project overhead, general overhead, general supervision, profit, insurance, bonding, and all other costs incurred;

(iii) **for materials supplied**: an amount equal to the actual cost of materials supplied by the Design-Builder or Subcontractors at invoice cost (which includes all freight and express charges, all taxes, and all other costs incurred to supply the materials to the site) plus **10%**, in full payment and reimbursement for all costs incurred in supplying materials;

(iv) **for Owner/Operator Equipment approved by the Ministry Representative prior to its use**: an amount equal to the applicable Equipment Rental Rates as full payment and reimbursement for all fuel, oil, lubrication, repairs, maintenance, operator wages and benefits, and other costs incidental to owning and operating the equipment plus **15%** of that amount to cover all costs related to such equipment and its operator;

(v) **for all other equipment approved by the Ministry Representative prior to its use**: an amount equal to the applicable Equipment Rental Rates (Without Operator) as full payment and reimbursement for all fuel, oil, lubrication, repairs, maintenance, and other costs incidental to owning and operating the equipment plus **15%** of that amount to cover all costs related to such equipment; and

(vi) **for preparatory activities**: an amount equal to the actual costs of preparatory activities performed by the Design-Builder and Subcontractors including, without limitation, transportation of tools and equipment and personnel travel time (when included in a collective agreement) plus **10%** of the approved amount to cover all costs related to the preparatory activities, if

(a) the Item is not included within the Items in the original Schedule of Prices, and

(b) the payment is pre-approved in writing by the Ministry Representative.

DB 52.06 The Design-Builder shall submit a "Daily Report for Extra Work" to the Ministry Representative for any Work performed on a Force Account Basis on any day in which any Work is performed on a Force Account Basis.

DB 52.07 The Design-Builder shall not be eligible for payment for any part of Force Account Basis Work that is not recorded in accounting records as to the resources and hours attributable to the specific Work.

DB 52.08 The accounting records shall not establish entitlement to compensation.

DB 53. PAYMENT FOR REIMBURSABLE DELAY

DB 53.01 The Design-Builder may claim compensation for a Reimbursable Delay provided it:

(i) notifies the Ministry Manager in writing, not later than **seven days** following the start of a Reimbursable Delay, of the intention of the Design-Builder to make a Claim together with reasons for the Claim;

(ii) notifies the Ministry Manager in writing, not later than **seven days** after the Design-Builder's resumption of Work, of the dates for which compensation for the Reimbursable Delay shall be claimed; and,

(iii) not later than **30 days** after the resumption of Work, gives the Ministry Manager full written particulars of the nature and magnitude of the Claim including, without limitation, the following Claim documentation,

  (a) a description of the basis for the Reimbursable Delay citing the specific provision of this Agreement under which the Claim is being brought,

  (b) a list of all equipment on the Site at the time the Reimbursable Delay occurred, that was idled by the Reimbursable Delay,

  (c) a list of any equipment moved to other locations during the Reimbursable Delay,

  (d) a list of the Design-Builder's supervisory staff at the Site before and after the Reimbursable Delay began and details of applicable pay rates,

  (e) a list of equipment operator costs,

  (f) the most recent Time Schedule prior to the Reimbursable Delay and the impact of the Reimbursable Delay on those items on the "critical path", and

  (g) any other documents requested by the Ministry Manager.

DB 53.02 If the Design-Builder complies with **DB 53.01**, and the Ministry determines that a Reimbursable Delay has occurred, the Ministry shall, subject to **DB 53.03**, pay the Design-Builder the following direct costs which, in the opinion of the Ministry Manager, were necessarily and properly incurred by the Design-Builder and were not reasonably avoidable by the Design-Builder:

(i) costs of supervisory staff committed to the Project, excluding costs of time paid for greater than **eight hours** in any one day and excluding costs for Saturdays, Sundays and Holidays;

(ii) costs of labour (other than supervisory staff), including Owner/Operator labour, approved in writing by the Ministry Manager;

(iii) equipment idle time loss for equipment idled by the Reimbursable Delay determined as

  (a) in the case of equipment owned or leased on a long-term basis by the Design-Builder

- for the first **21 days** only, equipment idle time multiplied by the Bare Equipment Rates, and
- for the **22nd and subsequent days**, the actual loss which the Design-Builder demonstrates, to the satisfaction of the Ministry Manager, is wholly attributable to the Reimbursable Delay and resulted from the existence of other work on which the Design-Builder could have used the idle equipment,

(b) in the case of rented equipment leased on a short term basis, the incremental actual rental costs that are wholly attributable to the Reimbursable Delay, to a maximum of **seven days**, and

(c) in the case of Owner/Operator Equipment, the equipment idle time, to a maximum of **three days,** multiplied by the Bare Equipment Rates;

(iv) 5% of the sum of **DB 53.02(i), DB 53.02(ii), and DB 53.02(iii)**, as overhead;

(v) reasonable board and lodging costs;

(vi) increases in material costs wholly attributable to the Reimbursable Delay; and

(vii) reasonable costs of moving equipment off and back to, the Site to enable judicious use by the Design-Builder of that equipment up to the maximum amount determined pursuant to **DB 53.02(iii)**.

DB 53.03 The Ministry shall not pay the Design-Builder for equipment that is inoperative due to breakdown or for equipment which was not in use at the time that the Reimbursable Delay started.

DB 54. GST

DB 54.01 The Ministry certifies to the Design-Builder that the goods and services provided under this Agreement are for the use of, and are being purchased by, the Ministry with Crown funds and therefore are not subject to the Goods and Services Tax (GST).

DB 54.02 The Design-Builder shall not charge GST to the Ministry for any goods or services supplied.

DB 55. APPROPRIATION

DB 55.01 Notwithstanding any other provision of this Agreement, the obligation of the Ministry to pay money to the Design-Builder under this Agreement is subject to:

(i) there being sufficient monies available in an appropriation, as defined in the ***Financial Administration Act,*** to enable the Ministry, in any fiscal year or part thereof when any payment of money by the Ministry to the Design-Builder falls due under this Agreement, to make that payment; and

(ii) Treasury Board, as defined in the ***Financial Administration Act***, not having controlled or limited, under the ***Financial Administration Act***, expenditure under any appropriation referred to in **DB 55.01(i)**.

DB 56. LOSS OF PROFITS

DB 56.01 Under no circumstances shall the Design-Builder be entitled to any compensation or payment not specifically provided for in the Agreement including, without limitation, any payment for loss of profits or consequential damage or loss.

DB 57. NOTICES

DB 57.01 Except as provided in **DB 57.02**, any notice by either party to the other shall be in writing.

DB 57.02 In addition to the notice required by **DB 57.01**, a verbal notice shall be given as soon as the party giving the notice becomes aware of the event or circumstance which gives rise to the notice being given.

DB 57.03 Parties to this Agreement shall deliver any written notices or other communications required or permitted under this Agreement personally, by facsimile, email with confirmation of receipt or by other means of telecommunication that provides a written record of delivery. Delivery by mail will not be considered timely notice under this Agreement.

DB 57.04 Any notice or document transmitted by facsimile transmission from either party is deemed given, for the purposes of any time restrictions of this Agreement, when transmitted, if transmitted to the fax numbers set out on the execution page or such other fax numbers as either party may notify the other, in writing. Any notice or document transmitted by email from either party is deemed given, for the purposes of any time restrictions of this Agreement when transmitted and confirmation of delivery is obtained, if transmitted to the email address as either party may notify the other, in writing.

DB 57.05 Either party may notify the other party of a change in email address or facsimile number, for the purposes of **DB 57.01**. A change in email address or facsimile number, so notified, is effective upon receipt of the notice.

DB 58. CONFLICT OF INTEREST

DB 58.01 The Design-Builder shall not, during the Term, perform a service or provide advice or information to any party where that service, advice, or information may or does, in the opinion of the Ministry Manager, give rise to a conflict of interest between the obligations of the Design-Builder to the Ministry under this Agreement and the obligations of the Design-Builder to any other party.

DB 59. CONFIDENTIALITY

DB 59.01 The Design-Builder shall treat as confidential and shall not, without the prior written consent of the Ministry Manager, disclose or permit to be disclosed, any information supplied to, obtained by, or which comes to the knowledge of the Design-Builder as a result of this Agreement except insofar as the disclosure is necessary to enable the Design-Builder to fulfill its obligations under this Agreement or as required by law.

DB 59.02 Any documentation relating to the Project that is in the custody or under the control of the Ministry is subject to the ***Freedom of Information and Protection of Privacy Act***.

DB 59.03 Unless otherwise stated in this Agreement and subject to Freedom of Information and Protection of Privacy Act all information submitted by the Design-Builder to the Ministry shall be considered confidential during the Term and the Ministry shall not, without the prior written consent of the Design-Builder, publish or disclose the information, except as insofar as such publication or disclosure is required by law.

DB 59.04 Notwithstanding **DB 59.03**, the Ministry may use any such information in the analysis and cost estimation of this and other projects.

DB 60. ANNOUNCEMENTS

DB 60.01 The Design-Builder shall not make any public announcement relating to the Project or this Agreement without the prior written approval of the Ministry Manager.

DB 60.02 The Design-Builder acknowledges that the Ministry may, in its discretion and without consultation with the Design-Builder, make any public announcement relating to the Project.

DB 61. INTERPRETATION

DB 61.01 Where this Agreement provides that a statute or other document applies, it is a statute or document of the Province of British Columbia unless otherwise stated, and includes every amendment to it, every regulation made under it, and any enactment passed in replacement or substitution for it.

DB 61.02 Unless the context otherwise requires, any reference to any article, schedule, section or subsection, paragraph or subparagraph by number is a reference to the appropriate article, schedule, section or subsection, paragraph or subparagraph of this Agreement.

DB 61.03 Head notes and indices in this Agreement are inserted for convenience of reference only, form no part of this Agreement, and do not affect the interpretation of this Agreement.

DB 61.04 In this Agreement, a person means a corporation, firm, association, and other legal entity, and wherever the singular or masculine is used it is as if the plural, the feminine, or the neuter, as the case may be, had been used where the context or the parties requires.

DB 61.05 If any provision of this Agreement or the application thereof to any person or circumstance is unenforceable, the remainder of this Agreement and the application of that provision to any other person or circumstance are not affected and this Agreement is enforceable to the extent permitted by law.

DB 61.06 If any one or more provisions of this Agreement conflict, then the provisions apply in the following order:

(i) this Design/Build Agreement;

(ii) any Supplemental Agreements, in reverse chronological order;

(iii) the Glossary of Terms;

(iv) the Time Schedule;

(v) the Insurance Specifications and Bonding Requirements;

(vi) the Ministry Supplied Materials and Services Appendix;

(vii) the Schedule of Prices;

(viii) the Special Provisions;

(ix) Project Scope, Design Criteria and Performance Specifications including relevant portions of the Request for Proposals (as amended by Addenda, if any) incorporated into this Agreement;

(x) the Standard Specifications;

(xi) all other technical standards, specifications, and guideline manuals;

(xii) all other Schedules to this Agreement; and

(xiii) portions of the Proposal incorporated in this Agreement.

DB 61.07 In this Agreement, figured dimensions prevail over scaled dimensions.

DB 61.08 In this Agreement, the units of measurement are:

(i) determined on the basis of the "International System of Units" established by the "General Conference of Weights and Measures"; and

(ii) as defined by the *Weights and Measures Act* (Canada).

DB 61.09 A reference to a "day" or "days" means a calendar day or days, unless a contrary intention is expressed in this Agreement.

DB 61.10 Time is of the essence of this Agreement.

DB 61.11 Where there is a time limitation under this Agreement, and the time in question for performance of an obligation expires on a Saturday, Sunday or a Holiday, the time for performance of the obligation governed by the time limitation is extended to the next day that is not a Saturday, Sunday or Holiday.

DB 61.12 In the calculation of time, the first day shall be excluded and the last day included.

DB 61.13 Any audits, reviews, inspections, approvals, acceptance or consent by the Ministry in connection with any of the Work shall be for the limited purposes of enabling the Ministry to review the conformance of the Work, and the performance of the Agreement by the Design-Builder, with this Agreement, and shall not under any circumstances relieve or excuse the Design-Builder from all of its obligations to ensure complete compliance with this Agreement, and, without limitation, the requirement that the Project meet the standards of quality and safety as specified in this Agreement.

DB 61.14 Approval, review or acceptance by the Ministry of any aspect of the Work does not relieve the Design-Builder of its obligation to perform all Work in accordance with the Agreement.

DB 61.15 Where the Agreement anticipates the use of a specific form, an alternative instrument may be used which clearly identifies the instrument as being a substitute for the specified form, and by such use, shall implicitly incorporate any terms and conditions pre-printed on the specified form.

DB 62. FURTHER ASSURANCES

DB 62.01 Each of the parties shall, upon the reasonable request of the other, do or cause to be done all further things for the better performance of this Agreement.

DB 62.02 Neither the Ministry nor the Design-Builder shall take advantage of any apparent discrepancy, ambiguity, error, or omission in this Agreement and shall notify the other party forthwith following the detection of anything it suspects may be an ambiguity, discrepancy, error, or omission.

DB 63. MINISTRY PROPERTY

DB 63.01 Any property provided by or on behalf of the Ministry to the Design-Builder as a result of the Agreement is the exclusive property of the Ministry. The Design-Builder shall deliver the property to the Ministry forthwith following the Completion Date or earlier termination of the Agreement.

DB 63.02 The Ministry may, prior to the completion or termination of the Agreement, give written notice to the Design-Builder requiring the Design-Builder to deliver to the Ministry the property or any part of the property, in which event the Design-Builder shall forthwith comply with the request.

DB 63.03 The Design-Builder assigns all ownership rights, including copyright, in the Design and the Project Material to the Ministry and shall deliver to the Ministry Manager the Project Material upon the earlier of a demand by the Ministry, the End Date or the prior termination of this Agreement.

DB 63.04 The Design-Builder shall obtain, and forward to the Ministry Manager with the Design and the Project Material, a waiver of moral rights from each individual who has created any portion of the requested Design or Project Material.

DB 64. RECORDS

DB 64.01 The Design-Builder shall, in connection with this Agreement:

(i) establish and maintain, at a location within British Columbia, accurate books of account and records (including supporting documents) to the satisfaction of the Ministry Manager;

(ii) forthwith following the request of the Ministry Manager, give written particulars of the location of the books of account and records; and

(iii) permit the Ministry at any time during normal business hours, to copy and audit any one or more of the books of account or records (including supporting documents),

for **six years** following the End Date or until the date any proceeding, claim, dispute, audit, arbitration, or litigation arising in connection with this Agreement is resolved or completed, whichever is later.

DB 64.02 The Design-Builder shall permit the Ministry at all reasonable times during the Term to inspect and copy any or all of the Project Material.

DB 65. REPORTS

DB 65.01 The Design-Builder shall, upon the request of the Ministry:

(i) fully inform the Ministry of Work done and to be done by the Design-Builder and, if requested by the Ministry, submit that information in writing; and

(ii) permit the Ministry at all reasonable times to inspect, and copy any findings, data, specifications, drawings, working papers, reports, documents and material whether complete or otherwise that have been produced, received or acquired by the Design-Builder, or provided by or on behalf of the Ministry to the Design-Builder as a result of the Agreement.

DB 66. AUDIT

DB 66.01 The Ministry may, in its discretion, conduct an audit of all books and records of the Design-Builder that, in any way, relate to the Project or to any Claim or Dispute and has all powers necessarily incidental to conducting an audit including, without limitation, the right to inspect and take copies of the books and records of the Design-Builder in connection with this Agreement upon reasonable notice and at reasonable times.

DB 66.02 Without limiting the generality of **DB 66.01**, the Design-Builder shall make available to any representatives of the Ministry all information concerning the Project including, without limitation, the following:

(i) diaries, daily time sheets, supervisors' daily reports;

(ii) insurance, welfare, and benefits records;

(iii) payroll registers and tax forms;

(iv) invoices and requisitions;

(v) cost distribution worksheets;

(vi) equipment records (including, without limitation, hours of use and distribution);

(vii) invoices from vendors, rental agencies, Subcontractors, Owner/Operators, and agents;

(viii) payment certificates of Subcontractors, Owner/Operators, and agents;

(ix) canceled cheques (payroll and vendors);

Without limiting the generality of **DB 66.01**, the Design-Builder shall make available to any representative of the Ministry all information and documents relating to each Dispute; that full supports entitlement to any claim or Dispute, and all information and details regarding the magnitude of any claim or Dispute including worksheets used to establish the cost components for all items of each claim or Dispute.

DB 66.03 The Design-Builder shall fully cooperate with and assist the Ministry, to conduct an audit pursuant to this Article.

DB 67. SUCCESSORS AND ASSIGNS

DB 67.01 The Design-Builder shall not, without the prior written consent of the Ministry Manager, assign, either directly or indirectly, any right or obligation of the Design-Builder under this Agreement.

DB 67.02 The Ministry may, upon notice to the Design-Builder, assign any or all of its rights or obligations under this Agreement to any third party.

DB 67.03 This Agreement continues to the benefit of and binds the Ministry and its assigns and the Design-Builder and its successors and permitted assigns.

DB 68. DUTY TO MITIGATE

DB 68.01 The Design-Builder and the Ministry will take all reasonable and necessary steps to minimize and avoid shall all costs and impacts arising out of the performance of the Work and this Agreement.

DB 69. WAIVER

DB 69.01 No waiver by either party of a right of that party or any breach by the other party in the performance of any of its obligations under this Agreement is effective unless it is in writing.

DB 69.02 No waiver of any right or obligation is a waiver of any other right or obligation under the Agreement.

DB 69.03 Failure or delay to complain of an act or failure of the other party or to declare the other party in default, irrespective of how long the failure or delay continues, does not constitute a waiver by the party of any of its rights against the other party.

DB 70. SURVIVAL OF TERMS

DB 70.01 All terms of this Agreement in favour of the Ministry and all rights and remedies of the Ministry, either at law or in equity, survive the expiry or earlier termination of this Agreement.

DB 71. ENTIRE AGREEMENT

DB 71.01 This Agreement represents the entire contract and agreement between the Design-Builder and the Ministry and no other representations or agreements, oral or otherwise, exist between the parties with respect to the subject matter of this Agreement unless referred to in this Agreement. The Design-Builder has not relied upon or been induced by any representation, promise or warranty whatsoever by the Ministry or any officer, employee or agent of the Ministry, in entering into the Agreement or with respect to the Work, other than as set out in the Agreement.

DB 71.02 Each Schedule, Appendix and any Supplemental Agreement attached to the Agreement is an integral part of the Agreement as if set out at length in the body of the Agreement

DB 72. AMENDMENTS

DB 72.01 This Agreement may only be amended by an agreement of the parties in writing. No such amendments shall be valid unless executed by the Ministry Manager and the Design-Builder Manager.

DB 73. GOVERNING LAW

DB 73.01 This Agreement shall be governed, construed and interpreted in accordance with the laws of the Province of British Columbia.

DB 73.02 The Design-Builder hereby irrevocably attorns itself to the jurisdiction of the courts of the Province of British Columbia in all matters related to this Agreement.

DB 74. LIMITATIONS FOR ACTIONS

DB 74.01 The Design-Builder's right to commence any legal proceedings or any action against the Ministry for any matter arising directly or indirectly out of the performance or non-performance of the Design-Builder's or Ministry's obligations under the Agreement:

(i) only arises in respect of any Dispute after strict compliance with the dispute resolution provisions in this agreement set out in **Article 49.00**; and

(ii) is subject to the waiver and release set out in **DB 36.08**; and

(iii) shall be absolutely barred upon the expiration of **18 months** after the Actual Completion Date.

DB 74.02 The Design-Builder shall not assert any claim, file or commence any legal proceeding or any action, or seek any other recourse against the Ministry's officers, employees or agents.

DB 75. JOINT AND SEVERAL LIABILITY

DB 75.01 Where the Design-Builder is a joint venture, partnership or consortium, each member agrees to be jointly and severally liable for the obligations of the Design-Builder.

[All partners, consortium parties, or joint venture partners of the Design-Builder shall execute the Agreement.]

[Where a special purpose shelf or numbered company is created for the Project to be the Design-Builder, parental guarantees or other performance security acceptable to the Ministry shall be provided.]

IN WITNESS WHEREOF duly authorized representatives of the Ministry and of the Design-Builder have set their hands on the dates set out below:

Project No. and Description: ______________________

THIS AGREEMENT IS DATED FOR REFERENCE: _________________

SIGNED on behalf of the Ministry

(address)
(address)
Telephone:
Facsimile:

This ____ day of _________, 20__.

____

(Name and Position)

For the Ministry {seal}

____

(Name and Position)

Witness

SIGNED on behalf of:

(Design-Builder)
(address)
(address)
Telephone:
Facsimile:

This ____ day of _________, 20___.

____

(Name and Position)

Authorized Signatory for the Design-Builder c/s

____

(Name and Position)

Witness

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GLOSSARY OF TERMS
Design/Build Agreement

The following provisions are incorporated into and form a part of the Request for Proposals and the Design/Build Agreement, including all Schedules and appendices, unless the context otherwise requires:

Actual Completion Date means the date specified in the Completion Certificate as the date on which the Work is completed;

Actual Substantial Completion Date means the date specified in the Letter of Substantial Completion as the date on which Substantial Completion was achieved;

Addendum means each and every written document issued by the Ministry which changes, amends or corrects the RFP;

Agreement means the agreement to be entered into by the Ministry and the Preferred Proponent, inclusive of the Design/Build Agreement and all Schedules and appendices listed in the "Order of Contents", as may be amended from time to time by the parties;

Alternative means a proposition put forward by the Proponent or Design-Builder, for approval by the Ministry, requesting consideration of a variance from the Standards or a requirement of the RFP;

Appropriation has the meaning ascribed to it in the *Financial Administration Act*;

Authorized Signatory or **Authorized Signatories** means the person or persons having legal authority to execute all documentation on behalf of the Design-Builder and to legally bind the Design-Builder by their signatures;

Award means the written notice to the Design-Builder from the Ministry, in the form of an award letter, accepting the Proposal;

Bare Equipment Rates means the applicable Equipment Rental Rates (Without Operator) multiplied by 35%;

Bonds means the performance bond and the labour and material payment bond for the Project, as required by the Agreement, each in the form set out in Schedule A of the Agreement;

Builders Lien Act means the *Builders Lien Act*, R.S.B.C. 1997, c. 45, as may be amended, repealed or replaced from time to time;

Change To Work means the addition, deletion, extension, increase, decrease, or alteration of the Design Criteria and Performance Specifications, Plans, Special Provisions, or materials of the Project, or part thereof, within the intended scope of the Agreement;

Claim means a written notice by the Design-Builder to the Ministry of a Reimbursable Delay for which the Design-Builder may be entitled to compensation;

Closing Location means the location specified on the Summary of Key Information, as determined by the Contact Person as the only acceptable location for delivery of Proposals;

Closing Time means the time and date indicated on the Summary of Key Information, as determined by the Contact Person as the time after which Proposals will be deemed late and incapable of acceptance;

Company means a company as defined in the *Company Act* (R.S.B.C. 1996, c. 62) as may be amended, repealed or replaced from time to time, and in good standing with respect to all registration and filing requirements of the *Company Act* and the British Columbia Registrar of Companies at the Closing Time;

Company Act means the *Company Act* (R.S.B.C. 1996, c.62) and includes the *Business Corporations Act*, (S.B.C. 2002, c. 57) when brought into force by regulation;

Completion Certificate means a written certificate issued to the Design-Builder from the Ministry Manager in the form and subject to the conditions in the Agreement acknowledging completion pursuant to the Agreement;

Completion Date means the date specified in the Time Schedule for completion of the Work as may be extended from time to time in accordance with the Agreement;

Construction means all things, other than Design, necessary to complete the Work;

Contact Person means the person designated as such in the RFP, and is the sole authorized representative of the Ministry to be contacted by Proponents in all matters related to the RFP;

Contaminants means any materials, substances or special (hazardous) wastes, the storage, manufacture, disposal, treatment, generation, use, transport, remediation, or release into the environment of which is now or hereafter prohibited, controlled, or regulated under the *Waste Management Act*, (R.S.B.C., 1996, c. 482) and the Contaminated Sites Regulations (Reg. 375/96), as they may be amended, repealed or replaced from time to time.

Contract Price means the price to be paid by the Ministry to the Design-Builder as full and final payment for satisfactory performance of the Work, as specified in the Agreement as it may be adjusted from time to time pursuant to the Agreement;

Design means the compendium of drawings, plans, specifications and other Project Material produced by the Designers to define the items of Work to be constructed;

Design-Builder means the party with whom the Ministry executes the Agreement for performance of the Work;

Design-Builder Manager means the person(s) designated by the Design-Builder having the authority of the Design-Builder specified in the Agreement;

Design-Builder Representative means the persons designated by the Design-Builder having the authority of the Design-Builder specified in the Agreement to supervise specific aspects of the Work;

Design/Build Agreement means the document containing the general terms and conditions of the agreement between the Ministry and the Design-Builder for the Work;

Design Schedule means the schedule detailing the various components of the Design and the anticipated Design milestone and completion dates;

Designer means a professional, lawfully registered to perform work in the Province of British Columbia, responsible for any portion of the Design;

Designated Contact Person means the person specified by the Ministry in the RFP as the sole person to be contacted by Proponents on any matter related to the RFP;

Designated Subcontractor means any Subcontractor with one or more Subcontracts having an aggregate value of not less than $200,000;

Designated Supplier means any Supplier who has one or more Subcontracts or purchase agreements used in or incorporated into the Work having an aggregate value of not less than $200,000 who is not a Designer or a Supplier of any of the following materials:

(a) liquid asphalt cement products;

(b) electrical materials;

(c) steel other than fabrications;

(d) manufactured Portland cement concrete, where delivered by the Supplier using its own trucks; or

(e) plastic, steel or concrete pipe;

Dispute means any claim, dispute or difference between the Design-Builder and the Ministry arising in any way in connection with the Agreement;

Disqualification means a decision by the Ministry to exclude a Proposal from the evaluation and Award process in accordance with the RFP;

Disturbed Surface means any feature, natural or man-made, whether within or outside the Site, which has been, in the opinion of the Ministry Representative,

(a) disturbed, damaged, destroyed, modified, replaced or constructed by the Design-Builder, or

(b) deleteriously affected by an action or inaction of the Design-Builder or by any Subcontractor or an element under the Design-Builder's control or responsibility,

including, but not limited to, detours, embankments, excavations, drainage ditches and systems, shoulders, signs and existing roads to and within the Site;

Emergency Work means work classified by the Ministry Representative as Emergency Work pursuant to the Agreement;

End Date means the date described in **DB 3.02** of the Agreement;

Environmental Window means any period of time during the Term designated as such by the Ministry or by any competent federal or provincial environmental government authority branch or agency whose jurisdiction or authority may be applicable to the Agreement;

Equipment Rental Rates means the applicable rates for equipment rental established in accordance with the "Equipment Rental Rate Guide" published and distributed by the B.C. Road Builders and Heavy Construction Association in effect at the time the applicable Work is performed; or where the rates are not set out within the Equipment Rental Rate Guide, then through negotiation between the Ministry Representative and the Design-Builder prior to use of the equipment on the Project;

Equipment Rental Rates (Without Operator) means the applicable Equipment Rental Rates for equipment provided without operators;

Escalator Clause means a clause obligating the Ministry to pay for increases in the costs of material, labour or both during the Term;

Event of Default means an event described in **Article 45.00** and **DB 47.01** of the Agreement;

Extension of Time means an extension of time to complete the Work, pursuant to **Article 42.00** of the Agreement;

Financial Administration Act means the *Financial Administration Act*, R.S.B.C. 1996, c. 138 as may be amended, repealed or replaced from time to time;

Financial Proposal means the Design-Builder's financial undertakings, submitted in accordance with the RFP, and as incorporated into the Agreement;

Force Account Basis means the method of payment to the Design-Builder for the performance of the Work in the absence of any other stipulated or negotiated method of payment, as described in **Article 52.00** of the Agreement;

Force Account Rate means the rate calculated on a Force Account Basis, to be applied to the Work performed pursuant to **Article 52.00** of the Agreement for which payment is on a Force Account Basis;

Freedom of Information and Protection of Privacy Act means the *Freedom of Information and Protection of Privacy Act*, R.S.B.C. 1996, c. 165, as may be amended, repealed or replaced from time to time;

Governmental Approvals means approvals or permits issued by the Federal or Provincial Government, or other regulatory body, but does not include an approval issued by the Ministry;

Holdback means any or all sums retained as contract security from payments by the Ministry pursuant to **Article 6.00** of the Agreement;

Holiday has the meaning in the *Interpretation Act*, R.S.B.C. 1996, c. 238, as may be amended, repealed or replaced from time to time;

Insurance Specifications means the insurance specifications as set out in Schedule A to the Agreement;

Item means an item of Work identified in the Schedule of Prices other than a Provisional Sum Item;

Item Price means the price shown on the Schedule of Prices as payable to the Design-Builder for satisfactory completion of an Item;

Letter of Substantial Completion means a letter issued to the Design-Builder by the Ministry acknowledging the occurrence of Substantial Completion as described in the Agreement;

Limits of Construction means the geographic limits of the Project as described in the Special Provisions or the Design, or both as the case may be;

Lump Sum Item means any Item identified in the Schedule of Prices, other than a Provisional Item;

Lump Sum Price means the amount to be paid by the Ministry to the Design-Builder for satisfactory completion of a Lump Sum Item;

Maintenance Specifications means the maintenance specifications for maintenance services contained in the document in effect at the date of issuance of the RFP entitled "2003/2004 Highway Maintenance Contracts – Maintenance Specifications" published by the Ministry, as amended by the Ministry from time to time;

Management Plans means the Design-Builder's plans, as set out in Schedule C of the Agreement, outlining details of the organization and control of the Work;

Ministry means the Province of British Columbia as represented by the Minister of Transportation, and includes the Minister of Transportation and the officers, agents and employees of the Ministry of Transportation;

Ministry Manager means the person designated as such by the Ministry;

Ministry Representative means the person(s) designated as such by the Ministry;

Notice means notification in writing by one party to the Agreement to the other party to the Agreement, to make the second party aware than an event or circumstances have or are anticipated to give rise to cost or time impacts to the other party;

Owner/Operator means the registered owner of any Owner/Operator Equipment;

Owner/Operator Equipment means any equipment hired on a time basis inclusive of operator, unless such equipment is hired through a Subcontract, approved in advance, by the Ministry Representative;

Plans means the plans of the Project as set out in Schedule C of the Agreement that form part of the Design;

Preferred Proponent means the Proponent who has submitted the best overall Proposal as determined by the Ministry;

Prime Members means any firm or company, making up part of the Proponent, which proposes to be responsible for 20% or more of the Design Work, Construction Work or the Work;

Project means the project being undertaken by the Ministry for which the Work is required;

Project Material means any findings, data, specifications, drawings, working papers, reports, documents and other material, whether complete or otherwise, that have been produced, received or acquired by the Design-Builder, or provided by or on behalf of the Ministry to the Design-Builder as a result of the Agreement.

Proponent means a person (including a partnership, joint venture or company) who submits a Proposal to the Ministry in accordance with the requirements stipulated in the RFP;

Proposal means an offer by a Proponent, in a form that complies with the requirements of the RFP, to perform the Work;

Proposal Form means the formal proposal form provided by the Ministry in the RFP;

Proposal Security means the financial security required by the RFP, in form acceptable to the Ministry, guaranteeing that a Proponent will, if their Proposal is accepted by the Ministry, enter into the Agreement;

Proposed Plans means the Design-Builder's proposed detailed formulation of programs of action, in response to the requirements of the RFP;

Protest of Decision means a challenge to a decision made by the Referee;

Provisional Sum Item means an Item identified in the Schedule of Prices which is provided as a source of funds for work of unknown scope and undefined specification;

Provisional Sum means a sum of money set aside by the Ministry for certain Work which may or may not be required;

Quality Assurance means the planned and systematic activities implemented in the quality system to provide adequate confidence that an entity will fulfill requirements for quality;

Quality Control means operational techniques and activities that are used to fulfill requirements for quality;

Rectification Period means a period of time allowed for rectification of an Event of Default;

Referee means the person appointed in accordance with the Agreement to render decisions on Disputes;

Referee Services Agreement means the document in Schedule B and referenced in **Article 49.00** of the Agreement which is to be used to retain the Referee;

Reference Documents means the documents supplied to the Design-Builder by the Ministry as listed in Schedule N of the Agreement;

Reimbursable Delay has the meaning ascribed to it in **Article 41.00** of the Agreement;

Request for Proposals or **RFP** means the document of the same name issued by the Ministry for the Project;

Resume Work Order means a Work Order issued by the Ministry Representative to the Design-Builder, requiring the Design-Builder to resume Work, in whole or in part as described in the Work Order, on the Project;

Revision means a change made by a Proponent to its Proposal;

RFP Documents means the documents listed in the Order of Contents of the RFP;

Schedule means any schedule that forms a schedule to the Agreement;

Schedule of Payment Adjustments means the listing of adjustments, without limitation, that may be made by the Ministry to payments due the Design-Builder for, among other things, early or late Substantial Completion or late Completion;

Schedule of Prices means the list of prices for Items of Work, which is included in the RFP and forming a part of Schedule E to the Agreement;

Scope of Work means the summary of the Work, as described in the Agreement, to be undertaken to complete the Project;

Site means the areas:

- (a) vested as highway as defined in the *Highway Act*, R.S.B.C. 1996, c. 188, and
  - (i) on or within the Limits of Construction, and
  - (ii) outside the Limits of Construction, where described, referenced or designated in the Traffic Management Plan, the Special Provisions, the Standard Specifications and the Traffic Control Manual for Work on Roadways, as the case may be,
- (b) within the licenses to construct that are indicated or referenced in the Plans, Design or Special Provisions, and
- (c) all additional areas as may, from time to time, be designated in writing or be depicted by Plans by the Ministry pursuant to the Agreement;

Site Occupation Date means the date authorized by the Ministry Manager in accordance with **Article 15.00** of the Agreement;

Special Provisions means the terms as set out within Schedules G to the Agreement;

Standard Specifications means the Standard Specifications for Highway Construction so named and published by the Ministry and in effect on the date of issuance of the RFP as amended from time to time unless a different version is specified in the RFP, Special Provisions or any Addenda, in which case the version so specified will prevail;

Standards means the compendium of requirements for Design, specifications, and other technical reference documents set out in the Agreement;

State of Suspension means an extended interruption of some or all of the Work, approved or directed by the Ministry Representative, in a Stop Work Order, but does not include a suspension pursuant to **DB 45.04(iv)** of the Agreement;

Statutory Declaration(s) means the document appropriate for the nature of the declaration, in the form provided by the Ministry in the Required/Standard Forms Appendix of the Agreement;

Stop Work Order means a Work Order issued by the Ministry Representative to the Design-Builder requiring the Design-Builder to stop Work, in whole or in part, on the Project;

Subcontract means a contract to perform any portion of the Work, including but not limited to supply of any materials or resources, to which the Ministry is not a party;

Subcontractor means any person having a Subcontract;

Substantial Completion has the meaning attributed to it in **Article 35.00** of the Agreement;

Substantial Completion Date means the date specified in the Agreement by which the Design-Builder must achieve Substantial Completion;

Summary of Key Information means the document of the same name, forming part of the RFP;

Supplemental Agreement means a written agreement entered into by the parties to the Agreement for the purpose of modifying the Agreement;

Supplier means any party supplying materials that are used in or incorporated into the Work;

Supporting Documents means the documents so named in the RFP and supplied to the Design-Builder by the Ministry as listed in the RFP;

Surety means a bonding company acceptable to the Ministry, that undertakes the obligations of the Bonds or Proposal Security;

Technical Proposal means the compendium of plans and Technical Reports submitted by the Proponent in response to the RFP;

Technical Reports means the reports produced by the Design-Builder in response to Part 1 of the RFP;

Term means the term of the Agreement as set out in **Article 3.00** of the Agreement;

Time Schedule means the first overall project time schedule, including the Design Schedule and the Construction Schedule, provided by the Design-Builder either voluntarily or in response to a request from the Ministry for a project time schedule and includes any amendments thereto accepted by the Ministry;

Traffic Control Manual for Work on Roadways means the manual published by the Ministry of Transportation and entitled "Traffic Control Manual for Work on Roadways", 1999 update, as it may be amended or replaced by the Ministry from time to time;

Traffic Management Plan means the document of the same name to be delivered by the Design-Builder to the Ministry pursuant to the Agreement, as it may be amended from time to time by the Design-Builder, in accordance with the terms and conditions of the Agreement;

Unacceptable Work means any work, workmanship, materials, or products produced or supplied by the Design-Builder or any Subcontractor which, in the opinion of the Ministry Representative, does not conform to the requirements of the Agreement;

Unauthorized Work means any work done:

(a) by a Proponent prior to the acceptance of the Proposal by the Ministry,

(b) contrary to or regardless of the instructions of the Ministry,

(c) beyond the lines and dimensions shown in the Design, or as given, notwithstanding due consideration for permissible variations as determined by the Ministry Representative, or

(d) other than the Work, without the authority of the Ministry Representative;

Utility Relocation means the relocation of the infrastructure of utility companies or municipalities, as described in **Article 26.00** of the Agreement;

Warranty Period means the period defined in the Agreement during which the Design-Builder is required to repair any deficiencies that arise in the Work;

Work means the provision of all labour, services, material and equipment and any action as necessary for the Design-Builder to complete and perform its obligations in accordance with the terms and conditions of the Agreement;

Work Order means a written order issued by the Ministry to the Design-Builder in the form prescribed by the Ministry for the specific situation, requiring the Design-Builder to do Work or refrain from doing Work, whether covered by the Agreement or not, and includes, without limitation, an order to:

(a) add, extend or delete Work,

(b) alter the Plans or Standards,

(c) speed up or delay Work,

(d) stop or resume Work, and/or

(e) remedy defects or deficiencies in the Work,

and, without limiting the foregoing, includes a Work Order on one of the following forms:

(i) Work Order (Stop Work),

(ii) Work Order (Resume Work),

(iii) Work Order/Supplemental Agreement,

(iv) a Ministry's instruction,

(v) Engineer's Instruction, or

(vi) any other document prepared by the Ministry Representative clearly marked with one of the above titles and indicating the Ministry's intent to use a Work Order.

SCHEDULES

SCHEDULE A:
INSURANCE AND BONDING REQUIREMENTS

A. INSURANCE AND BONDING REQUIREMENTS

A1.0 ISSUANCE OF INSURANCE

All insurance coverage will be issued with insurers acceptable to the Minister, and issued by companies licensed to transact business in the Province of British Columbia.

A2.0 EVIDENCE OF COVERAGE

The following evidence of coverage will be supplied by the Contractor:

File originals or signed, certified copies of all current policies and any other endorsements necessary to comply with these insurance specifications and any other requirements outlined in the Agreement with: The Manager, Insurance and Bonds, Ministry of Transportation, PO Box 9850 STN Prov Govt, 4th Floor, 940 Blanshard Street, Victoria, B.C. V8W 9T5.

Any endorsements issued to satisfy the specific requirements outlined in these documents must be countersigned, and only original or certified copies of endorsements are acceptable.

For Automobile Liability insurance, a duly executed Insurance Corporation of British Columbia APV 47 form may be used for evidence of coverage or renewal provided that if excess limits are purchased through private insurers, evidence will be provided by way of signed, certified copies of such policies.

A2.1 LIABILITY POLICIES

Third Party Liability Insurance

"Wrap-Up" Comprehensive (Commercial) General Liability insurance including non-owned automobile and contractual liability insurance will be arranged with inclusive limits of not less than FIFTEEN MILLION DOLLARS ($15,000,000) for bodily injury, death, and property damage arising from any one accident or occurrence. The insurance policy will indemnify the named insureds and the additional insureds under the policy for any sum or sums which the insured may become liable to pay or shall pay for bodily injury, death or property damage or for loss of use thereof, arising out of or resulting from the work or operations of the Contractor or subcontractors, including all persons, firms or corporations who perform any of the work, in connection with the Contract, anywhere within Canada and the United States of America. In addition to the above limits, such liability insurance will also pay all costs, charges, and expenses in connection with any claims that may require to be contested by the insureds anywhere within Canada and the United States of America.

A2.2 EXTENSION OF COVERAGE

Such liability insurance will cover all liability arising out of completed operations, blanket written contractual, contingent employers liability, non-owned automobile liability, and liability assumed by the Contractor in connection with and applicable to this Contract.

A2.3 EXCLUSIONS NOT PERMITTED

Hazardous operations such as excavation, pile driving, shoring, blasting, under-pinning, or demolition work or any other operation or work to be performed shall not be excluded from insurance coverage.

Claims arising out of the legal liability imposed upon the insureds at common law and extended by Statute for bodily injury or death to employees of the insured, except that this exclusion shall not apply to the liability imposed upon or assumed by the insured under any Workers' Compensation Statute or for assessments by any Workers' Compensation Board.

Liability assumed by the insureds under contract with railroad companies for the use and operation of railway sidings or crossings.

Liability assumed by the Contractor under and applicable to any Gravel Licenses.

Liability arising out of all products where the material is supplied by the Contractor.

Any tort liability assumed by the Contractor under the Contract.

Other types of services not listed above, to be performed by the Contractor under the Contract.

IF vessels owned, leased or operated in the course of the Contract are covered under the Comprehensive (Commercial) General Liability policy, then the Contractor will ensure that at all times during the term of the Contract the minimum limits and amounts as required by the Marine Liability Act and or regulations to the Marine Liability Act are maintained. The Contractor will be responsible for ensuring that any changes to the requirements of the Marine Liability Act and/or the regulations of the Marine Liability Act are reflected in the insurance coverage provided. Notwithstanding the requirements of the Marine Liability Act, the limits under the Comprehensive (Commercial) General Liability insurance must not be less than $15,000,000 (FIFTEEN MILLION).

Deductible

A maximum deductible on the primary insurance policy will be allowed for any one accident or per occurrence of up to FIFTEEN THOUSAND DOLLARS ($15,000) on the primary insurance policy. Payment of any deductible will be the responsibility of the Contractor.

Self-Insured Retention

A maximum self-insured retention of up to FIFTEEN THOUSAND DOLLARS ($15,000) for any one accident or per occurrence will be permitted for Contractors providing umbrella/excess liability insurance subject to having a minimum primary insurance policy of TWO MILLION DOLLARS ($2,000,000.00) underlying the umbrella/excess.

A2.4 PROFESSIONAL LIABILITY INSURANCE (ERRORS & OMISSIONS)

Single Project Specific Professional Liability insurance shall be arranged and the policy shall contain minimum limits of FIVE MILLION DOLLARS ($5,000,000)per claim, and FIVE MILLION DOLLARS ($5,000,000) annual aggregate insuring against all insured loss or damage including coverage for third party property damage, bodily injury or death, arising out of the professional services rendered by the Contractor, the Contractor's Sub-contractor, and/or any Engineers and any of their servants or employees including personnel on loan to the Contractor and personnel who perform normal services of the Contractor under this agreement. The named insured shall also include but not be limited to all architectural or engineering firms, including project managers, construction managers, applied science technologists, land surveyors, or quantity surveyors engaged in the project.

A maximum deductible of TWENTY-FIVE THOUSAND DOLLARS ($25,000) will be allowed.

Exclusions for design/build or joint venture projects will not be permitted.

Coverage shall be maintained for a period of 24 months following completion of the project.

Cancellation/Limitation

The required insurance shall not be cancelled, removed, or endorsed to restrict coverage or limits of liability, without thirty (30) days notice in writing by Registered Mail to: The Manager, Insurance and Bonds, Ministry of Transportation, PO Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, B.C. V8W 9T5.

A3.0 AUTOMOBILE INSURANCE

Automobile Liability coverage with inclusive limits of not less than FIVE MILLION DOLLARS ($5,000,000) providing third party liability and accident benefits insurance and automobile physical damage insurance including collision and comprehensive coverage must be provided for all vehicles required by law to be licensed that are owned, leased or rented by the Contractor, and that are used in the performance of the Contract.

A3.1 EQUIPMENT INSURANCE

The Contractor shall obtain, maintain and provide evidence of "ALL RISKS" insurance coverage, satisfactory to the Ministry, covering all equipment owned, rented, or leased and used in the performance of this contract, or for which the Contractor may be responsible.

A3.2 AIRCRAFT INSURANCE

IF aircraft (including helicopters) are used in the performance of the Contract and are owned, leased or rented by the Contractor, then third party liability coverage with inclusive limits of not less than TEN MILLION DOLLARS ($10,000,000) must be provided.

A4.0 ADDITIONAL CONDITIONS FOR ALL LIABILITY POLICIES (EXCEPT OWNED AUTOMOBILE AND PROFESSIONAL LIABILITY INSURANCE) ENDORSED AS FOLLOWS:

Notwithstanding any other terms, conditions, or exclusions elsewhere in this policy, it is understood and agreed that this policy is extended to include insurance coverages and clauses as follows:

Her Majesty the Queen in Right of the Province of British Columbia as represented by the Minister of Transportation, together with the employees, agents, and servants of the Minister, hereinafter referred to as the Additional Named Insured, is added as an Additional Named Insured, in respect of liability arising from the work or operations of the Insured in connection with contracts entered into between the Insured and the Additional Named Insured.

The insurance as is afforded by this policy shall apply in the same manner and to the same extent as though a separate policy had been issued to each insured. Any breach of a condition of the policy by any Insured shall not affect the protection given by this policy to any other insured. The inclusion herein of more than one Insured shall not operate to increase the limit of liability under this policy.

Products and Completed Operations Hazard coverage shall be provided and such cover shall remain in full force and effect for a period of twelve (12) months after the work has been completed, irrespective of the expiry date of the policy.

A5.0 BUILDERS RISK, DIRECT DAMAGE, INSTALLATION FLOATER, "ALL-RISK" INSURANCE

The Contractor shall, at the Contractor's expense, obtain and maintain insurance against all risks of physical loss or damage including but not limited to, structural collapse and transit risks by any conveyance to and/or from the site, while there, awaiting and/or during erection, installation and testing, occurring anywhere within Canada or the continental United States of America, and until handed over and accepted by the Minister. The insurance policy shall provide coverage for and limits to the full value of the contract and include the value of any material and/or structure and/or property destined for or entering into or forming part of the work, whether belonging to the Contractors, sub-contractors and/or the Minister and/or the Engineers and/or otherwise and including automatically any changes in design or method of construction occurring during the term of the policy.

Coverage For Flood And Earthquake Must Be Included In The Insurance Policy

Deductibles Per Occurrence

1. Flood - TWENTY-FIVE THOUSAND ($25,000) Maximum.
2. Earthquake - up to TEN PERCENT (10%) of actual value at time of loss, maximum of TWO HUNDRED AND FIFTY THOUSAND ($250,000).

NOTE: In the event of an insured earthquake loss occurring, the earthquake insurance policy deductible will be shared between the Contractor and the Ministry on the following basis:

The first $25,000 of the deductible will be payable by the Contractor;

The remaining portion, up to but not exceeding the maximum deductible for earthquake losses shown above, will be payable by the Ministry.

3. All other losses up to **FIVE THOUSAND ($5,000)** or **ONE PERCENT (1%)** of the contract amount, whichever is greater.
4. The payment of any deductible shall be the responsibility of the Contractor except for earthquake which will be shared as stated above.

Additional Named Insured

Where coverage is provided under the requirements of this Part, the policy(s) shall be endorsed as follows: "Her Majesty the Queen in Right of the Province of British Columbia as represented by the Minister of Transportation is added as an Additional Named Insured."

Loss Payable

The insurance policy must contain a loss payable clause directing payment to: "Her Majesty the Queen in right of the Province of British Columbia as represented by the Minister of Transportation".

Waiver of Subrogation

The following Waiver of Subrogation is required: "In the event of any third party loss or damage or any physical loss or damage to the work, or contractor's equipment, the settlement or payment of the subsequent claim shall be made without the right of subrogation against her Majesty the Queen as represented by the Minister of Transportation or any employees, servants or agents of the Minister."

APPENDIX A

Bonds

SPECIMEN

PERFORMANCE BOND

NO. ______________ $______________

KNOW ALL PERSONS BY THESE PRESENTS, that __________ **(CONTRACTOR'S NAME)** as Principal, hereinafter called the Principal, and **(SURETY/INSURANCE COMPANY NAME AND ADDRESS)** __________________, a corporation created and existing under the laws of Canada, and duly authorized to transact the business of Suretyship in Canada, as Surety, hereinafter called the Surety, are, subject to the conditions hereinafter contained, held and firmly bound unto HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA AS REPRESENTED BY THE MINISTER OF TRANSPORTATION, as Obligee, hereinafter called the Obligee, in the amount of ______________________________ Dollars ($), lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a contract with the Obligee, dated the day of **(DATE OF AWARD)** 20___ for ______________ **(DESCRIBE CONTRACT)** ____ which Contract Documents are by reference made a part herecf, and is hereinafter referred to as the contract.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall well and faithfully observe and perform all the obligations on the part of the Principal to be observed and performed in connection with the contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

(1) Whenever the Principal shall be, and declared by the Obligee to be, in default under the contract, the Surety shall

- (a) if the work is not taken out of the Principal's hands, remedy the default of the Principal,
- (b) if the work is taken out of the Principal's hands, and the Obligee directs the Surety to undertake the completion of the work, complete the work in accordance with the contract provided that a contract is entered into for the completion of the work
  - (i) it shall be between the Surety and the completing contractor, and
  - (ii) the selection of such completing contractor shall be subject to the approval of the Obligee,
- (c) if the work is taken out of the Principal's hands and the Obligee, after reasonable notice to the Surety, does not direct the Surety to undertake the completion of the work, assume the financial responsibility for the cost of completion in excess of the moneys available to the Obligee under the contract,
- (d) be liable for and pay all the excess costs of completion of the contract, and

(e) not be entitled to any contract moneys earned by the Principal, up to the date of Principal's default on the contract and any holdbacks relating to such earned contract moneys held by the Obligee, and the liability of the Surety under this Bond shall remain unchanged provided, however, and without restricting the generality of the foregoing, upon the completion of the contract to the satisfaction of the Obligee, any contract moneys earned by the Principal or holdbacks related thereto held by the Obligee may be paid to the Surety by the Obligee.

(2) The Surety shall not be liable for a greater sum than the amount specified in this Bond.

(3) No suit or action shall be instituted by the Obligee herein against the Surety pursuant to these presents after the expiration of two (2) years from the date on which final payment under the contract is payable.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this bond this _____ day of ______________, 20 ____.

SIGNED and SEALED
In the presence of:

_____________________________________ SEAL
For the Principal

_____________________________________ SEAL
For the Surety Attorney-in-fact

LABOUR AND MATERIAL PAYMENT BOND
(British Columbia Government Form)

No. ______________

$__________________________

Note: This Bond is issued simultaneously with another Bond in favour of the Obligee conditioned for the full and faithful performance of the contract.

KNOW ALL PERSONS BY THESE PRESENTS THAT __________ **(CONTRACTOR NAME)** as Principal, hereinafter called the Principal, and **(SURETY/INSURANCE COMPANY NAME AND ADDRESS)** a corporation created and existing under the laws of Canada, and duly authorized to transact the business of Suretyship in Canada, as Surety, hereinafter called the Surety are, subject to the conditions hereinafter contained, held and firmly bound unto HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA AS REPRESENTED BY THE MINISTER OF TRANSPORTATION, as Obligee, hereinafter called the Obligee, for the use and benefit of the Claimants, their and each of their heirs, executors, administrators, successors and assigns, in the amount of Dollars ($ _____________) of lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated the day of _________________ 20___ for _________________ **(DESCRIBE CONTRACT)** which Contract Documents are by reference made a part hereof, and is hereinafter referred to as the contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A Claimant for the purpose of this Bond is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the contract, labour and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof, shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the contract. The prevailing industrial value of equipment shall be determined, insofar as it is practical to do so, in accordance with and in the manner provided for in the latest revised edition of the publication of the Canadian Construction Association titled "Rental

Rates on Contractors Equipment" published prior to the period during which the equipment was used in the performance of the contract.

2. The Principal and the Surety, hereby jointly and severally agree with the Obligee, that every Claimant who has not been paid as provided for under the terms of their contract with the Principal, before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of their contract with the Principal and have execution thereon. Provided that the Obligee is not obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants, or any of them, to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceeding, then such act, action or proceeding, shall be taken on the understanding and basis that the Claimants, or any of them, who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to the Obligee by reason thereof. Provided still further that, subject to the foregoing terms and conditions, the Claimants, or any of them, may use the name of the Obligee to sue on and enforce the provisions of this Bond.

3. No suit or action shall be commenced hereunder by any Claimant:

    (a) unless such Claimant shall have given written notice within the time limits hereinafter set forth to each of the Principal, the Surety and the Obligee, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to the Principal, the Surety and the Obligee, at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or other part of Canada in which the subject matter of the contract is located. Such notice shall be given

        (1) in respect of any claim for the amount or any portion thereof, required to be held back from the Claimant by the Principal, under either the terms of the Claimant's contract with the Principal or under the Mechanic's Liens Legislation applicable to the Claimant's contract with the Principal whichever is the greater, within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with the Principal.

        (2) in respect of any claim other than for the holdback, or portion thereof, referred to above, within one hundred and twenty (120) days after the date upon which such Claimant did, or performed, the last of the work or labour or furnished the last of the materials for which such claim is made, under the Claimant's contract with the Principal;

    (b) after the expiration of one (1) year following the date on which the Principal ceased work on the contract, including work performed under the guarantees provided in the contract.

(c) other than in a Court of competent jurisdiction in a Province or Territory of Canada in which the subject matter of the contract, or any part thereof, is situated and not elsewhere, and the parties hereto agree to submit to the jurisdiction of such Court.

4. The Surety agrees not to take advantage of Article 1959 of the Civil Code of the Province of Quebec in the event that, by an act or an omission of a Claimant, the Surety can no longer be subrogated in the rights, hypothecs and privileges of said Claimant.

5. The amount of this Bond shall be reduced by, and to the extent of any payment or payments made in good faith, and in accordance with the provisions hereof, inclusive of the payment by the Surety of Mechanics' Liens which may be filed of record against the subject matter of the contract, whether or not claim for the amount of such lien be presented under and against this Bond.

6. The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

IN WITNESS WHEREOF, the Principal and the Surety have Signed and Sealed this Bond
this _____ day of ___________________ 20

SIGNED and SEALED
In the presence of:

_______________________________ SEAL
For the Principal

_______________________________ SEAL
For the Surety Attorney-in-fact

SCHEDULE B:
REFEREE SERVICES AGREEMENT

B. REFEREE SERVICES AGREEMENT

THE PARTIES TO THIS AGREEMENT ARE:

Her Majesty the Queen in Right of the Province of British Columbia, as represented by the Minister of Transportation,

____
(the "Province")

____
(address for service)

____
(address for service)

______________________ ______________________
(phone) (fax)

AND

____
(the "Contractor")

____
(address for service)

____
(address for service)

______________________ ______________________
(phone) (fax)

AND

____
(the "Referee")

____
(address for service)

____
(address for service)

______________________ ______________________
(phone) (fax)

WHEREAS the Province and the Contractor have entered into a contract ______________________

____
herein referred to as "the Contract", and the Contract calls for the appointment of a Referee to fairly and expeditiously dispose of any Disputes which may arise between the Province and the Contractor.

THE PROVINCE, THE CONTRACTOR AND THE REFEREE AGREE AS FOLLOWS

1 Appointment

1.1 The Province and the Contractor hereby appoint the aforementioned person to act as Referee in accordance with the Contract.

1.2 The Referee hereby accepts the appointment and acknowledges receipt of a complete copy of the Contract.

1.3 The appointment of the Referee and any rights, responsibilities and obligations arising out of this Agreement are personal to the Referee and may not be assigned.

2 Bias

2.1 The Referee has disclosed to the other parties, and will promptly disclose in the future, any facts or circumstances which may give rise to a reasonable apprehension of bias by the Province or the Contractor.

3 Duties

3.1 The Referee will promptly and faithfully perform all duties and discharge all responsibilities and obligations assigned to the Referee as specified in this Agreement and in the Contract.

3.2 The Referee will, upon the written request of either party, attend or facilitate meetings between the Province and the Contractor.

4 Cooperation

4.1 The Province and the Contractor will cooperate with each other and with the Referee to allow the Referee to perform their duties and discharge all responsibilities as expeditiously as possible.

5 Communications

5.1 Except for matters of a purely administrative nature, the Referee will not communicate orally with the Province or the Contractor, or their representatives, respecting any matters arising out this Agreement unless both parties, or both of their representatives, are present.

5.2 The Referee will send copies of any written communications sent to either party or received by the Referee from either party, to the other party as well.

6.0 Notices

6.1 Any notices or other documentation required to be given under this Agreement will be given in writing to the respective parties by delivery to the addresses for service shown in this Agreement or such other addresses as notified by the parties.

7 Evidence

7.1 The Referee is not bound by the strict rules of evidence.

8 Confidentiality

8.1 The Referee will hold in strict confidence and will not reveal, copy or disclose to any person, other than an expert retained under this Agreement, any documents or information provided to the Referee or to which the Referee gains access in the course of performing the duties or discharging the responsibilities under this Agreement, without the prior, written permission of both the Province and the Contractor.

9 Experts

9.1 The Referee may retain any legal or technical experts the Referee considers necessary.

9.2 The Referee will impose on all experts the restrictions and obligations which are imposed on the Referee by Article 5 and Article 8 of this Agreement.

9.3 The Referee will promptly notify the Province and the Contractor of the names and the terms of appointment of any experts retained.

9.4 The Referee will direct all experts to give their advice or report, either orally or in writing, simultaneously to the Referee, the Province, and the Contractor.

10 Fees and Disbursements

10.1 The Province will pay the Referee monthly in arrears upon receipt of an invoice from the Referee, a minimum monthly fee of $ ___________.

10.2 In addition to the minimum monthly fee stated above, the Province will pay upon receipt of an invoice from the Referee, monthly in arrears for;

a) services rendered by the Referee in excess of seven (7) hours in any month, at a rate of $ ___________ per hour; and

b) all actual and reasonable disbursements made by the Referee in the performance of their duties under this Agreement, including but not limited to travel, board, lodging, administrative services, sundry disbursements, and any fees and costs reasonably incurred in connection with obtaining any expert advice.

10.3 In the event of termination of this Agreement, the Province will promptly reimburse the Referee for all fees and disbursements incurred prior to the effective date of termination and all costs reasonably associated with an orderly termination of service.

10.4 The Contractor agrees that, without further notice, the Province may recover from any payments otherwise payable to the Contractor, an amount equal to fifty percent (50%) of all payments made in good faith by the Province to the Referee.

10.5 Total payments to the Referee shall not exceed $___________________________________.

11 Liability

11.1 The Referee will not be liable to either party for any act or omission in connection with any of the duties, responsibilities or obligations performed in good faith by the Referee.

12. Termination

12.1 The Province and the Contractor may by mutual agreement and by written notice to the Referee, terminate this Agreement at any time; and such notice of termination shall be effective immediately upon delivery unless otherwise stated.

12.2 The Referee may, by giving thirty (30) days written notice to the Province and the Contractor, terminate this Agreement.

13 Completion of Agreement

13.1 The Contractor and Province will jointly advise the Referee by written notice of the effective date when the Referee's services under this Agreement are no longer required and on that effective date the obligations of the Referee will be terminated.

THIS AGREEMENT, executed in triplicate, is effective as of the _____ day of______________199___ .

THE REFEREE:

______________________________ ______________

Signed by the Referee Date

THE CONTRACTOR:

______________________________ ______________

Signed by Contractor's Authorized Signatory Date

____

print name and position of Contractor's Authorized Signatory

THE PROVINCE:

______________________________ ______________

Signed by an Authorized Signatory for the Province Date

____

print name and position of Authorized Signatory for the Province

SCHEDULE C:
THE WORK

SCHEDULE D:
PROJECT TIME SCHEDULE

D. PROJECT TIME SCHEDULE

D1.1 PROJECT SCHEDULE

Project 09902 WP2

Sunset Beach to Lions Bay

Substantial Completion Date:

The Contractor will achieve Substantial Completion, as defined in DB34, on or before July 31, 2007.

Completion Date:

The Contractor will achieve Completion, as defined in DB35, of the Work on or before September 30, 2007.

D1.1.1 Free Flow Traffic Window for Adjacent Work

The Contractor shall provide a window where the Random 20 Minute Stoppages and Random 10 Minute Stoppages are not initiated as part of the Work, and Free Flow Traffic conditions are in place within the construction limits.

This Free Flow Traffic window will be utilized by the adjacent contractor to initiate the Traffic Stoppages as identified in Schedule J for construction on Highway 99 south of the Sunset Beach to Lions Bay southern limit of construction.

The length of the Free Flow Traffic window will be a maximum duration of 30 days where full stoppages are allowed and will occur on or between the dates of March 1, 2005 and May 31, 2005. Full stoppages are allowed on the days Monday to Thursday as defined in Table J-2-2 in Schedule J.

The Contractor will be provided with a minimum of 90 days notification prior to the initiation of the Free Flow Traffic window.

The Ministry will provide compensation to the Contractor of $8,000.00 per each day that Free Flow Traffic conditions are initiated. Also, the Ministry will extend the Substantial Completion Date and the Completion Date by an equal number of days that Free Flow Traffic conditions are initiated.

D1.2 CONTRACT SCHEDULE

D1.2.1 Preliminary Contract Schedule

Proponents shall submit a preliminary schedule for the design, construction and commissioning of the Work. The schedule shall be in a time-scaled CPM network diagram format and shall include all the tasks representing the design and construction of the major elements of the Work, the key milestones, the direction of work and the logical interdependencies between the tasks and the milestones.

The Preliminary Contract Schedule shall form the basis for the Contract Schedule.

D1.2.2 Contract Schedule

General

Within fourteen days following Award, the Contractor shall prepare and submit for review a comprehensive, detailed schedule for the performance of the Work. The schedule shall be based on, and developed from, the Preliminary Contract Schedule included in the Proponent's Proposal, and such amendments thereto agreed in writing with the Ministry Representative prior to the award of Contract.

The schedule shall clearly demonstrate the Contractor's design program including submittals at various levels of design for each discipline, all other required submittals, the construction work program, resource and equipment considerations, physical and environmental constraints and all other information to illustrate how the Contractor will achieve the milestone event dates, critical dates and the Substantial Completion and Total Performance dates specified in the Special Provisions. The schedule shall be the Contractor's representation, sequence and duration of the activities of the Work and of the schedule data that meets the Contract delivery requirements. The schedule shall be prepared so that an activity, or group of activities, corresponds with the payment items specified in the Schedule of Prices.

The schedule shall be prepared in computerized time-scaled network logic diagrams as well as in logic-linked barchart format and shall be submitted in both electronic and hard copy. The Contractor's scheduling software shall be able to interface seamlessly with Primavera P3, which is the Ministry's scheduling software for the Project.

The following criteria shall be adhered to in the preparation of the schedule:

- Activities shall be broken down so as not to exceed 10 working days in duration to permit progress monitoring;
- The schedule shall include activities for all stages of design development and submittals as well as for shop drawings developed internally by the Contractor;
- The schedule shall clearly indicate manufacturer's lead times, mode of transportation and delivery dates for any long delivery items;
- The schedule activity durations shall be based on regular working hours, single shift, unless otherwise noted;
- The schedule activity durations shall be in working days with an explanation of the calendars, non-working days and holidays used in the schedule;

- The schedule shall make adequate provision for seasonal variations in the weather and the conditions that may be expected from a study of weather records for the area;
- The schedule shall be arranged in accordance with a work breakdown structure that shall divide the Work into a common framework using a numbering system that allows for the integration of all Work; and
- The schedule shall be supported by submittal of a written narrative plan of the construction methods, major equipment procurement and mobilization, proposed manpower and any special requirements.

Upon agreement by the Ministry to the schedule described in this Schedule, it shall become the Contract Schedule and shall not be changed except with the written consent of the Ministry.

Agreement by the Ministry to the Contract Schedule or any modifications thereof shall not relieve the Contractor of the sole responsibility to comply with each milestone event requirement specified in the Special Provisions.

At the request of the Ministry from time to time, the Contractor shall provide a more detailed schedule of all or any part of the Work and, when agreed to by the Ministry, it shall form part of the Contract Schedule.

The Contractor shall submit a revised Contract Schedule to the Ministry for review when a Change Order, or a proposed Change to any Work item in the Contract Schedule, or an Excusable Delay as provided in the Contract, affects any milestone date or the sequence of activities.

The Ministry will, in a timely manner having regard to the Contract Schedule, provide to the Contractor any reports, data or other information pertinent to the Work, where it is obligated by the Contract Documents to provide the same.

Progress Report

Within five working days after the end of each calendar month, the Contractor shall submit to the Ministry three copies of a Progress Report which shall indicate actual progress of the Work in the form of an updated schedule showing achievements, including design progress and approved changes to the Contract Schedule up to the end of that month.

The Progress Report shall include a lookahead report and schedule highlighting the planned activities for the next 60 days.

The Progress Report shall include a written statement highlighting progress against the Contract Schedule and clearly identify any actual or anticipated delay together with the Contractor's proposed corrective action to overcome such delay.

The Progress Report shall include updated progress estimates for each item in the Schedule of Prices in conjunction with the Contract Schedule update for use in the earned value analysis performed by the Ministry.

The Progress Report shall include a cash flow projection schedule based on, and following the same format as, the Contract Schedule.

SCHEDULE E:
PAYMENT SCHEDULE

E. PAYMENT SCHEDULE

E1 SCHEDULE OF PRICES

As submitted with the Proposal.

E2 PROGRESS PAYMENT

The Contractor shall submit, at least ten working days before submission of its first application for partial payment, a Schedule of Values for the Work. This schedule will provide a breakdown of values for the contracted Work aggregating the Contract Price and will be the basis for partial payments. This breakdown will demonstrate reasonable, identifiable and measurable components of the Work. The sum of all values listed for each element shall be equal to the lump sum price proposed for each element. Subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments and price adjustments, positive and negative. Prices shall include a pro rata amount for overhead and profit applicable to each item. The Ministry may reject a Schedule of Values if it fails to provide reasonable detail, if any of its prices are excessively unbalanced, or if it fails to account for the entire Contract Price.

The Schedule of Values shall be used as the basis for reviewing the Contractor's application for payment.

SCHEDULE F:
QUALITY MANAGEMENT

F. QUALITY MANAGEMENT

F1.0 QUALITY MANAGEMENT PLAN

Subsequent to the submission of a Quality Manual at the proposal stage, as outlined in Part 1 – Clause 1.5.3.3, the Contractor shall at the post-award stage develop and submit for the Ministry's approval a comprehensive Quality Management Plan (QMP). The QMP shall describe in sufficient detail, or reference from the Quality Manual, the main components of the Quality Management System for this specific Work Package. The Plan will also include or reference:

- An organizational chart identifying by name, the QA Management Representative, Quality Assurance and Quality Control personnel.
- Description of their responsibilities, authority and linkage between to the Contractor's Top Management, Project Management, Design Management, Procurement Management and Construction Management Teams.
- Quality System Procedures (QSP) describing specific responsibilities, activities and documentation required in the performance of Quality Assurance and Quality Control of the design, procurement and construction phases. As a minimum documented procedures are required for Document Control, Control of Quality Records, Internal Audits, Control of Non-Conformities and Corrective/Preventive Actions.
- Detailed construction work method statements and work instructions that would be required for critical and complex activities where the absence of written instructions could have a negative impact on the product safety, quality, consistency, cost or schedule.
- Inspection and Test Plan (ITP), describing all the major Inspection and Test activities planned prior and during the design, procurement and construction phases of this Contract.

The ITP shall indicate:

- Inspection or Test Activity
- Frequency of Inspections and Tests
- Reference to inspection/test procedures, standards or codes eg. Special Processes/ MoT Standard Specifications/CSA Standards
- Reports/Checklists required
- Personnel responsible for inspection and test activity
- Contractor QA Review/Witness & Hold Points
- Internal Quality Audit Plan, verifying through systematic, independent and documented process that all the quality requirements are being fulfilled.

The Ministry shall review the Contractor's Quality Management Plan and other quality submittals and, if required, request changes to meet the requirements of this Contract. The review process will pay special attention to Contractor's Inspection and Test Plan to verify that the Contractor has taken full responsibility for all the quality assurance functions listed in the MoT Standard Specifications that were previously performed by the Ministry. The Inspection and Test Plan shall be consistent with the quality control and quality assurance requirements listed in the material specification, work methodology and end product specifications identified in the MoT Standard Specifications for Highway Construction, 2004 Edition. See Special Provisions Schedule G1.1.

The Ministry, upon approval of the Contractor's Quality Plans, shall perform scheduled quality audits throughout the design, construction, substantial completion, and completion stages of the Project. The Ministry reserves the right to conduct random quality audits on any activity, at all times and locations, and specific audits of areas that have been identified as critical quality items during the review process and scheduled quality audit program. The Contractor shall provide all reasonable facilities and assistance for the safety and convenience of the Ministry's auditors.

Submission Schedule

The Contractor shall submit to the Ministry Representative for acceptance the Quality Management documents as described in the Submission Schedule shown in Table F-2.

Table F-1: Relevant Sections of ISO 9001:2000: International Standard for Quality Management Systems

SECTION 4: QUALITY MANAGEMENT SYSTEM	
4.1	General Requirements
4.2	Documentation Requirements
SECTION 5: MANAGEMENT RESPONSIBILITY	
5.1	Management Commitment
5.2	Customer Focus
5.3	Quality Policy
5.4	Planning
5.5	Responsibility, Authority and Communication
5.6	Management Review
SECTION 6: RESOURCE MANAGEMENT	
6.1	Provision of Resources
6.2	Human Resources
6.3	Infrastructure
6.4	Work Environment
SECTION 7: PRODUCT REALIZATION	
7.1	Planning of Project Processes
7.2	Customer Related Processes
7.3	Design and Development
7.4	Purchasing
7.5	Production and Service Provision
7.6	Control of Monitoring and Measuring Devices
SECTION 8: MEASUREMENT, ANALYSIS AND IMPROVEMENT	
8.1	General
8.2	Monitoring and Measurement
8.3	Control of Nonconforming Product
8.4	Analysis of Data
8.5	Improvement

Table F-2: ***Submission Schedule for Quality Management, Inspection and***

At the time of the Proposal	The Contractor shall submit a copy of their company Quality Manual in accordance with Part 1 Clause 1.5.3.3.
Within 45 days of the date of Award and prior to commencement of Work on the site:	The Contractor shall submit Quality Management Plan (QMP), Quality System Procedures, Construction Work Method Statements, Inspection and Test Plan (ITP) and Internal Quality Audit Plan to the Ministry Representative for acceptance. Details of these plans and procedures are described in Clause F1.0 of this Schedule.
Within 7 days before inspection and testing:	The Contractor shall submit, to the Ministry Representative, the Inspection and Test Procedures/Checklists addressing the requirements of the Inspection and Test Plan as described in Clause F1.0 of this Schedule.
Within 7 days of the tasks identified in the ITP as those which will be witnessed by the Ministry Representative:	The Contractor shall notify the Ministry Representative when the tests identified in the Inspection and Test Plan will be conducted.
Within 5 days after completion of testing:	The Contractor shall submit test results to the Ministry. The test reports shall include the name and address of the organization performing all the tests and the date of the tests.
Once every month	The Contractor shall submit a summary of tests, non-conformances and corrective actions taken to rectify the non-conformities.
Within 7 days of completion of testing on a predetermined section of Work:	The Contractor shall submit Certificate of Compliance for the predetermined section of the completed work. (The Certificate of Compliance shall certify that "all the work was inspected and tested in accordance with the applicable standards and the work complies in all respects with the requirements of the Contract.")

SCHEDULE G:
SPECIAL PROVISIONS

SCHEDULE H:
REVIEW REQUIREMENTS AND DOCUMENTATION

H. DESIGN REVIEW AND RECORD DOCUMENTATION REQUIREMENTS

H1.1 DESIGN PROGRESS REPORTS

The Contractor shall prepare design progress reports that shall be submitted to the Ministry for compliance reviews. These reports shall be submitted during the development of the design at the stages shown in the Table H 1. These drawings will build on the content and details of the drawings included in the Proposal and will be in a format in accordance with the requirements of the *BC Supplement to TAC Geometric Design Guide*. The Contractor shall confirm drawing conventions and standards (e.g. AutoCAD standards, title block, stationing convention) with the Ministry Representative prior to commencing design drawing production. The Contractor shall organize review meetings with the Ministry and external agencies for the purpose of reviewing the design progress reports. The meeting shall be scheduled no sooner than 7 days following the submission of the design progress report and shall be held in Vancouver.

No later than 14 days following the review meeting or the submission of subsequent documentation, if required, the Ministry's review comments will be provided to the Contractor. The Contractor will address all Ministry review comments to the satisfaction of the Ministry Representative.

This process is not intended to preclude continuous liaison between the Ministry Representative and the designer during construction about design or construction problems.

The Ministry will review Contractor's submittals for general conformance with the requirements of the Contract Documents. Such review by the Ministry and any consequent comments to the Contractor's submittals by the Ministry, or any failure by the Ministry to detect an error or non-conformance with the requirements of the Contract Documents, shall not relieve the Contractor of the sole obligation to perform the Work in accordance with the Contract Documents or of the sole responsibility for the accuracy of the Contractor's submittals. The Contractor shall correct at its own expense any deficiency in the Work that arises due to error or non-conformance in any of the Contractor's submittals.

Table H 1 Design Stages

Discipline	Design Stage		
	50%	90%	100%
Highway	✓	✓	✓
Bridges	✓	✓	✓
Retaining Walls	✓	✓	✓
Geotechnical	✓		✓
Electrical			✓
Non-Standard Poles	✓		✓

The design stages 50, 90 and 100% are indicators of the relative progress of the design and the individual discipline requirements are described in detail in this Schedule.

For each submission, ten copies of the key plan, plans and profiles will be required; five copies of each of the other drawings and documentation will be required. An electronic copy of each submission in Microsoft Office and AutoCAD 14 compatible format shall be provided.

Design drawings shall be signed and sealed by the responsible engineer who shall be registered as a Professional Engineer with the Association of Professional Engineers and Geoscientists of BC.

H1.1.1 Design Progress Report Requirements

Bridges – 50% Design Submission

The 50% progress report will contain the following:

- an outline of the design codes, criteria, parameters, and philosophies;
- a description of the structure including span configuration, retaining walls, substructure, superstructure, articulation system, seismic load path, seismic restraints and seismic detailing;
- preliminary geotechnical recommendations including a description of geotechnical and groundwater issues;
- a description of maintenance and aesthetics considerations;
- general arrangement and preliminary sub-structure and superstructure drawings (11" x 17");
- a description of computer models used for analysis and design;
- the proposed construction sequencing including deck placement procedure;
- a draft of any Special Provisions required for construction of the structure.

Bridges – 90% Design Submission

The 90% progress report will contain the following:

- full size and reduced size (11" x 17") plots of all design drawings;
- a geotechnical report for the bridges;
- resolution of all Ministry review comments from the 50% progress report;
- special Provisions for construction of the structure

Bridges - 100% Design Submission

The final design will contain the following:

- full size and reduced size (11" x 17") plots of all design drawings. One set to be reproducible;
- a geotechnical report for the structure;
- resolution of all previous Ministry reviews;
- any special provisions for the construction of the structure;
- a neat, bound, indexed set of design calculations for the bridge structure initialled by both the designer and the checker.

Retaining Walls – 50% Design Submission

The 50% progress report will contain the following:

- an outline of the design codes, design criteria, parameters, and philosophies;
- description of the wall system, its components, and drainage requirements;
- drawings on 11" x 17" paper (folded into the report) showing the plan view, the elevation view, and a typical cross-section of the wall;
- preliminary geotechnical recommendations including a description of geotechnical and ground water issues;
- description of aesthetic and maintenance considerations;
- description of computer models used for analysis and design; and
- a clear description of the seismic design methodology.

Retaining Walls – 90% Design Submission

The 90% progress report will contain the following:

- final geotechnical report for the walls;
- full size and reduced size (11" x 17") plot of completed drawings; and;
- a neat, bound, indexed set of design calculations initialled by both the designer and the checker.

Retaining Walls – 100% Design Submission

The 100% progress report will provide resolution to all the Ministry's comments from all previous review meetings. The Contractor will submit to the Ministry Representative the final, full-sized, completed reproducible plans. These drawings will be signed and sealed by the design engineer.

Geotechnical – 50 and 100 %

Design notes for both the 50% and 100% submissions shall indicate:

- Surficial material,
- Stripping depths,

- Heights of cuts or fills along centre line,
- Heights of cuts or fills left and right of centre line,
- Slope angles left and right of centre line,
- S.G.S.B. thickness, and
- Any additional construction notes as conditions change along the alignment.

Geotechnical – 50% Design Submission

In addition to above, the 50% progress report will contain, but not be limited to, the following:

- preliminary recommendations for allowable vertical and horizontal loads and acceptable foundation systems for the structures including comments on possible differential settlements and estimated overall settlements;
- full size and reduced size a summary of any additional subsurface investigation that has bee completed. The summary is to also include drafted drill summary logs in Ministry format;
- an outline of the design codes, criteria, parameters, and philosophies;
- any changes to the design or layout of the concept since the submission of the preliminary design report;
- a description of computer models used for analysis and design;
- reduced size (11" x 17") drawings showing the road alignment in plan and section with drill hole locations shown on the plan and simplified summary logs shown on the profile. Design notes are to be shown along the bottom of the drawing. *
- a 50% geotechnical progress report for the structures which shall include reduced size (11" x 17") drawings showing general arrangements for the bridge structures in plan and profile, with drill locations shown in plan and simplified summary logs shown in profile

Geotechnical – 100% Design Submission

In addition to the above, the 100% progress report will contain, but not be limited to, the following:

- any additional Work that has been completed since the 50% progress report;
- a summary of any additional subsurface investigation that has been completed. The summary is also to include drafted drill summary logs in Ministry format.
- final recommendations for foundation systems, allowable loads, settlement and differential settlement predictions
- reduced size (11" x 17") drawings showing the road alignment in plan and section with drill hole locations shown on the plan and simplified summary

logs shown on the profile. Design notes are to be shown along the bottom of the drawing. "

- The 100 % geotechnical progress report for the structures is to have reduced size (11" x 17") drawings showing the general arrangements for the bridge structures in plan and profile, with drill locations shown in plan and simplified summary logs shown in profile.

Electrical – 100% Design Submission

The Contractor will provide a design report and drawings that, as a minimum, provide the following information:

- design illuminance levels for each road section;
- luminaire pattern and spacing for each road section;
- roadway luminaire type and mounting height for each road section;
- a completed draft copy of the traffic engineering check sheet;
- isolux evaluation of stray light impact to adjoining properties, particularly residential.
- details of any non-standard electrical component.
- bridge deck luminaire layouts;
- functional design of the traffic signal(s) showing controller and pole placement;
- points of power supply;
- locations where sign luminaires will be required; and
- locations of, and power requirement other than signals, signs and luminaires.

Non-Standard Poles – 50% Design Submission

Submit five copies of a conceptual design report for all non-standard sign supports and poles prior to commencing detailed design. The report will contain the following:

- conceptual drawings for the support system and foundations; and
- description of design codes, criteria, parameters and philosophies.

Non-Standard Poles – 100% Design Submission

Submit five copies of full sized drawings at the 100% completion stage for all non-standard sign support structures and non-standard poles, including foundations.

H1.1.2 Design Folders

Design folders shall be prepared for the 100% submission and will have indexes and sectional dividers. They shall contain pertinent correspondence and will be arranged in chronological order by subject matter. The folders will include design calculations and backup information for the areas outlined above. As an example, the roadway design folders will include, but not be limited to, a copy of all approvals, design reports, correspondence, and calculations such as, barrier requirements, drainage, traffic analysis, etc. The design folders for other disciplines shall follow a similar format and contain a similar collection of information.

The design submission must be completed in CaiCE project data format as per BC MoT Supplement to TAC Geometric Design Guide Section 1270 – October 2003, www.th.gov.bc.ca/publications/eng_publications/geomet/TAC/TAC.htm.

Contractor's survey data shall utilize the STS 2002 Project Grid Coordinate System. The survey shall satisfy the requirements of the Ministry's "General Survey Requirements" sections 200, 500, and 600.

H1.1.3 Record Documents

The original design drawings must not be amended in any way. Copies of the original AutoCAD design drawing disks are to be used and amended as required to reflect the actual constructed roadway template and amenities at Project Completion. The drawing numbers will remain the same as the originals for storage and retrieval purposes. Record Documents will be stand-alone documents and contain all of the original information except that which has been changed by the construction revisions.

The drawings will be drafted in the format and to the standards of the original design drawings and plotted on standard mylar drawing sheets with waterproof ink.

Each item or area on the drawing that has been changed from the original design will have an eight millimetre triangle adjacent to the area of the change with the number of the change inscribed within the triangle. The same number will be shown cross-referenced in a "Construction Revisions" block with a description of the change beside it. The triangle will be drawn with the apex of the triangle pointing towards the change.

All of the contract drawings will be included except staging drawings.

In addition to the above the Contractor shall submit to the Ministry the record documents as follows:

H1.1.4 Record Documents for Highways

The Contractor will submit to the Ministry Representative after construction of the highway, a set of Record Drawings and documents as follows:

- design plans;
- typical cross sections;
- supplemental drawings;
- geometrics and laning;
- profiles;
- signing plans showing all signs such as information, guide, service/attraction, regulatory and warning signs;
- pavement marking plans;
- underground utility plans;
- landscape plans;
- final record cross-section plans and material types on all roadways;
- hydrologic and hydraulic calculations, drawings and maps;
- all Quality Control folders showing test data and location;
- all final record electrical plans including wiring, conduit placement and illumination levels for all signs, signals, luminaries and other electrical works; and
- all final documentation on the safety audit.

H1.1.5 Record Documents for Bridges

The Contractor will submit to the Ministry Representative after construction of the bridge structures, a set of Record Drawings and documents for each bridge

The Contractor will submit the following:

- copies of all final versions of shop drawings;
- copies of all test results, mill certificates, and other Quality Control monitoring reports and information;
- copies of all geotechnical engineering reports and investigation results;
- daily construction diary;
- a complete log of all concrete placement summaries on a Concrete Inspection Report (Form H-47);
- a complete driving record for all piling installed. Submit on a full size drawing as per example in binder No. 3; and
- a complete record of the as-constructed deck concrete data. Submit on full size drawings as per example in binder No. 3. The drawings shall include:

As-constructed deck concrete data drawings shall include:

- as-constructed deck profiles at 3 m intervals along the centerline of the roadway and at 0.3 m offset from parapet lines. The elevations shall be referenced to a permanent benchmark.
- a table of actual elevations shall be produced and the difference from the design grade shall be plotted for each line.
- a sketch of the deck showing the direction and extent of each day's placement of concrete.
- the concrete design mix and adjustments.
- records on the number of loads cast in the concrete, air and slump content, any changes in conditions, identity of the placement areas, and concrete cylinder strengths.
- a design folder of Design calculations for construction revisions.

H1.1.6 Record Documents for Retaining Walls

The Contractor will submit to the Ministry Representative after construction of the retaining walls, a set of Record Drawings and documents for each wall.

The Contractor will submit the following:

- copies of all final versions of shop drawings;
- copies of all test results, mill certificates, and other Quality Control monitoring reports and information; and
- copies of all geotechnical and ground water engineering reports and investigation results.

H2.0 SIGNING OF DRAWINGS

The Contractor will sign and date each drawing when completed.

The record drawings will be signed and sealed by the original design engineer to verify the drawings represent the original design with all design revisions added.

H2.1 DISTRIBUTION OF DRAWINGS

The signed drawings will be forwarded to the Ministry Representative for review and comment. The mylar drawings will be accompanied by the AutoCAD.DWG format CD and a CD containing the CaiCE project data archive files.

After a final review by the Ministry Representative and the designer and when no further changes are to be made to the drawings, they will be distributed and filed.

H3.0 REQUIREMENTS FOR SUBMISSION OF CONSTRUCTION COMPLETION REPORT

Following completion of the Work, the Contractor will provide three sets of supporting details (Construction Completion Report) as a record document to the Ministry Representative. The narrative portion of the report should be about ten pages long. These supporting details are to be submitted within 1 month after issuance of the Completion Certificate.

The construction completion report will include, but not be limited to, the following items:

1. TITLE PAGE

2. TABLE OF CONTENTS

3. EXECUTIVE SUMMARY
3.1 Name of Designer
3.2 Project Map
3.3 Scope of Project
3.4 Type of Work
3.5 Working Conditions
3.6 Handling of Traffic
3.7 Summary of Major Issues Affecting the Project

4. CONTRACTOR
4.1 List of Subcontractors
4.2 List of Manpower and Major Equipment (including Subcontractors)

5. WORK METHODOLOGY
5.1 Construction Methods (unique or special)
5.2 Major Field Revisions (comments on design revisions during construction)
5.3 Materials Encountered

6. CONSTRUCTION PROGRESS HISTORY
6.1 Date Work Started
6.2 Date of Substantial Completion
6.3 Date Work Completed and Completion Certificate
6.4 Original and As-Built Construction Schedule
6.5 Key Dates (such as Start of Specific Tasks etc.)
6.6 Reasons for any Work Stoppage
6.7 Items Affecting Schedule (weather, R/W purchase, etc)

7. FINAL CONSTRUCTION COST SUMMARY
7.1 Guaranteed Maximum Price with any negotiated adjustments

8. MATERIAL TESTING
8.1 List of Types of Testing and Numbers

9. SPECIAL CONSTRUCTION ITEMS

10. ENVIRONMENTAL IMPACT

11. LANDSCAPING

12. PHOTOGRAPH INDEX
    - Emphasis is on the "Before" and "After"
    - Original Terrain, Construction and "Final" colour photographs.
    - Three copies of all available photos are required, mounted in photo albums, labelled and dated, plus negatives (maximum 400). Electronic files of photos preferred with approximately 20 prints in the report.

SCHEDULE I: CONSTRUCTION SAFETY

I. CONSTRUCTION SAFETY

I1.0 SCHEDULE OF CONSTRUCTION SITE SAFETY

In this Schedule, except as otherwise expressly provided herein:

- **"Base Safety Program"** means the occupational health and safety program that the Contractor will initiate and maintain, as described in this Schedule;
- **"Designated Prime Contractor"** means the Contractor, or another contractor, designated by the Province pursuant to section 4.1 of this Schedule to discharge the responsibilities of the Prime Contractor for the Specified Area;
- **"Designated Qualified Coordinator"** means the person designated by the Designated Prime Contractor to discharge the responsibilities of the Qualified Coordinator for the Specified Area;
- **"Designated Qualified Person"** means the person designated by the Designated Prime Contractor to discharge the responsibilities of the Qualified Person for the Specified Area;
- **"Designated Supervisor"** means the person who is designated by an Employer at a Multiple-Employer Workplace to discharge the responsibilities by a "supervisor" as described in the Workers' Compensation Act and the Regulation;
- **"Employer"** means an "employer" as defined in the Workers Compensation Act, and includes the Contractor;
- **"Joint Committee"** means the joint health and safety committee established and maintained by the Contractor in compliance with the Workers Compensation Act and the Regulation , and
- **"Multiple Employer Workplace"** means a workplace where workers of 2 (two) or more employers are working at the same time, and includes the Site and the Specified Area;
- **"Notice of Project"** means the notice of project described in the Regulation;
- **"Notice of Unsafe or Harmful Condition or Act"** means the written notice that the Contractor will deliver to any Employer pursuant to Article 5.0, in the form set out in Appendix "B" of this Schedule;
- **"Other Persons"** means any person or persons, other than Workers working on the Project, who, for whatever reason or purpose, are on the Site or the Specified Area;
- **"Prime Contractor"** means a "prime contractor" as defined in the Workers Compensation Act;
- **"Qualified Coordinator"** means the person, who meets the qualifications of a "qualified coordinator" described in the Regulation, and who is appointed by the Prime Contractor to discharge for the Site, the responsibilities of a

"qualified coordinator" as described in the Workers Compensation Act and the Regulation;

- **"Qualified Person"** means the person who meets the qualifications of a "qualified person" described in the Workers Compensation Act and the Regulation, and who is designated by the Prime Contractor to discharge for the Site the responsibilities of a "qualified person" as described in the Workers Compensation Act and the Regulations;
- **"Regulation"** means the British Columbia Regulation 296/97 entitled *"Occupational Health and Safety Regulation"* prescribed under the Workers Compensation Act, as amended from the time to time;
- **"Safety Officer"** means the person so designated by the Province pursuant to this Agreement;
- **"Specified Area"** means that part or those parts of the Site and any lands adjoining or overlapping the Site that are designated as the "Specified Area" in the Special provisions of the Contractor Document Package or in a written notice that may be issued by the Ministry Representative from time to time pursuant to section 4.1 of this Schedule;
- **"Workers"** means the employees, workers, servants, agents or invitees of Employers, including of the Contractor, at the Site or at the Specified Area;
- **"Workers Compensation Act"** means the Workers Compensation Act, R.S.B.C. 1996, c.492 as amended from time to time; and
- **"Workers Compensation Board"** means the Workers Compensation Board constituted under the Workers Compensation Act and Regulation.

I2.0 BASE SAFETY PROGRAM

Notwithstanding the limitation relating to the requirement for initiating and maintaining an occupational health and safety program set out in the Regulation, the Contractor will initiate and at all times maintain at the Site, and if the Contractor has agreed to be the Designated Prime Contractor, at the Specified Area, the Base Safety Program which will be designed to prevent injuries and occupational diseases within the contemplation of the Workers Compensation Act and the Regulation and, without limiting the generality of the foregoing, will describe how the Contractor will ensure that:

- where applicable, the Base Safety Program complies with the Requirement of the program entitled the "Prequalification Procedures for Bridge Construction and Painting Program" instituted by the British Columbia Ministry of Transportation and Highways;
- the requirements of an occupational health and safety program stipulated in the Regulation will be satisfied, including the establishment and maintenance of a Joint Committee;
- the activities of all Employers, Workers and Other Persons at the Site and, if applicable, at the Specified Area, relating to occupational health and safety will be coordinated;

- reasonably practicable measures are taken to establish and maintain a system or process to ensure compliance with the Workers Compensation Act and the Regulation in respect of the Site, and if applicable, the Specified Areas;
- all Workers, Employers, and Other Persons are made aware of all known or reasonably foreseeable health and safety hazards to which they may be exposed on the Site, and if applicable, the Specified Area, and are instructed in the terms of the Workers Compensation Act and the Regulation;
- compliance and accurate reports, records and documents relating to occupational health and safety activities at the Site and, if applicable, at the Specified Area, or related to the Work, will be established, maintained, reviewed and assessed on an ongoing basis;
- safety equipment and apparel are properly used and worn by Workers and Other Persons, as required pursuant to the Regulation and the Base Safety Program; and
- a first aid program in compliance with the Regulation is established, implemented and maintained at all times on the Site and, if applicable, on the Specified Area.

The Contractor will determine and control the manner in which the Base Safety Program is established, initiated, and maintained and the manner in which the instructions, direction, rules, policies and procedures contained therein are carried out.

I3.0 PRIME CONTRACTOR – THE SITE

The Contractor, by entering into the Agreement, agrees to be the Prime Contractor in connection with the Site for the purpose of the Workers Compensation Act and the Regulation.

The Contractor will, prior to commencement of the Work, deliver to the Ministry Representative, in writing:

- the name of each of the Qualified Coordinator and the Qualified Person in connection with the Site;
- a copy of the Notice of Project; and
- confirmation that the Base Safety Program has been initiated and is readily available on the Site.

The Contractor will, in connection with the Work and the Site:

- observe, abide by and comply with the Workers Compensation Act and the Regulations;
- deliver the Notice of Project to the Workers Compensation Board in accordance with the Workers Compensation Act and the Regulation;
- prominently post and at all times maintain on the Site the Notice of Project in accordance with the Workers Compensation Act and the Regulation;

- ensure that the person or persons to be appointed as the Qualified Coordinator and Qualified Person meet the qualifications of a "qualified coordinator" and "qualified person" as described in the Workers Compensation Act and the Regulation;
- appoint and at all times maintain a Qualified Coordinator to perform the functions of the "qualified coordinator" on the Site as described in the Workers Compensation Act and the Regulation, and as set out in this Schedule, and designate and at all times maintain no less than one Qualified Person to be responsible for health and safety activities of the Contractor in connection with the Work, including, without limiting the generality of the foregoing, administering the Base Safety Program;
- deliver written notice to the Ministry Representative of any change in the appointed Qualified Coordinator or the Qualified Person referenced in subsection 3.3 e) of this Schedule;
- establish and at all times maintain one or more Joint Committee;
- where conditions or activities affect the Workers of more than one Employer, or where there are overlapping or adjoining work activities of 2 (two) or more Employers at the Site, ensure,
  - that the Qualified Coordinator coordinates the occupational health and safety activities at the Site; and
  - that: Employers, Workers, Suppliers and Subcontractor of the Contractor, and their Persons; the work activities of Workers, Employers, Suppliers and Subcontractors of the Contractor and Other Persons; and the conditions of the Site comply with the Workers Compensation Act and the Regulation
- make the Base Safety Program and a copy of the Workers Compensation Act and the Regulation readily available at the Site;
- provide and maintain the Site in a manner that ensures the health and safety of persons at or near the Site;
- ensure that Workers, Employers and Other Persons are made aware of all known or reasonably foreseeable health and safety hazards to which they are likely to be exposed by the Work on the Site;
- do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with the Workers Compensation Act and the Regulation with respect to the Site;
- immediately notify Employers, Workers, Suppliers and Subcontractors of the Contract, and Other Persons of any hazard created by virtue of overlapping or adjoining work activities of 2 (two) or more Employers and ensure that the hazards are addressed throughout the duration of such activities;
- at the sole cost of the Contractor, provide, post and maintain 2 (two) signs, in accordance with the specifications, which contain the informational messaging stipulated in Appendix "A" of this Schedule at locations satisfactory to the Ministry Representative;

- immediately give written notice to the Ministry Representative of any event which is reportable or is subject to notification requirements under the Workers Compensation Act of the Regulation, and
- where the execution of the Work involves overlapping or adjoining work activities of 2 (two) or more Employers that create a hazard to Workers, cause the Qualified Coordinator to:
  - coordinate health and safety activities of all Employers at the Site in accordance with the Regulation;
  - publish and post at the site and otherwise make readily available on the Site, information relating to the health and safety activities at the Site, including without limiting the generality of the foregoing:
    - the name of the Qualified Coordinator,
    - a drawing of the Site showing the project layout, first aid locations, emergency transportation provisions and the evacuation marshalling station, and
    - a set of construction procedures designed to protect the health and safety of Workers at the Site,

  all in compliance with the requirements of the Workers Compensation Act and the Regulation.

14.0 DESIGNATED PRIME CONTRACTOR – THE SPECIFIED AREA

The Province may, in its sole discretion, designate in writing the Specified Area, and

- appoint in writing the Contractor to be the Designated Prime Contractor in connection with the Specified Area, and upon notification of such appointment the Contractor will deliver written confirmation to the Province of its agreement to be the Designated Prime Contractor; or
- appoint in writing a contractor other than the Contractor as the Designated prime Contractor in connection with the Specified Area, and will notify the Contractor in writing of the designation.

The Designated Prime Contractor, in connection with the Specified Area, will:

- deliver written confirmation to the Workers Compensation Board, with a copy to the Ministry Representative, of its agreement to be the Designated Prime Contractor for the Specified Area;
- appoint a Designated Qualified Coordinator to perform the function of the "qualified coordinator" as described in the Workers Compensation Act and the Regulation, and as set out in this Schedule for the Specified Area;
- where conditions or activities affect the Workers of more than one Employer, or where there are overlapping or adjoining work activities at the Specified Area, ensure that:
  - the Employers, Workers, Suppliers, and Subcontractors of the Designated Prime Contractor, and Other Persons,

  - the work activities of all Employers, Workers, Suppliers and Subcontractors of the Designated Prime Contractor and Other Persons, and
  - the conditions of the Specified Area,

  comply with the Workers Compensation Act and the Regulation;

- provide and maintain the Specified Area in a manner that ensures the health and safety of persons at or near the Specified Area;
- ensure that every Employer at the Specified Area is given the information known to the Designated Prime Contractor that is necessary to identify and eliminate or control hazards to the health or safety of Workers and Other Persons at the Specified Area;
- make a copy of the Workers Compensation Act and the Regulation readily available at the Specified Area; and
- cause the Designated Qualified Coordinator to:
  - coordinate health and safety activities of all Employers on the Specified Area in accordance with the Workers Compensation Act and the Regulation;
  - publish and post on the Specified Area and otherwise make information relating to overlapping or adjacent health and safety activities on the Specified Area readily available, including without limiting the generality of the foregoing:
    - the name of the Designated Qualified Coordinator.
    - a drawing of the Specified Area showing the project layout, first aid locations, emergency transportation provisions and the evacuation marshalling station; and
    - a set of construction procedures designed to protect the health and safety of Workers in the case of overlapping or adjacent work activities on the Specified Area,

    all in compliance with the requirements of the Workers Compensation Act and the Regulation.

I5.0 SITE AND SPECIFIED AREA NOTICE PROCESS

If the Prime Contractor, in connection with the Site, or the Designated Prime Contractor, in connection with the Specified Area determine, in its reasonable discretion, that:

- any Employer or its Workers has failed to comply with the Workers Compensation Act or the Regulation, or to act in accordance with the requirements of the Base Safety Program for coordinating health and safety activities; and
- the failure creates or may create an unsafe or harmful condition on the Site or Specified Area that poses a danger of injury or death to Workers,

The Prime Contractor, or the Designated Prime Contractor, as applicable, may issue a Notice of Unsafe or Harmful Condition or Act to the applicable Employer, stipulating in reasonable detail the basis for the insurance of the Notice of Unsafe or Harmful Condition or Act, and the Contractor, or the Designated Prime Contractor, as applicable, will deliver a copy of the Notice of Unsafe or Harmful Condition or Act to the Ministry Representative.

The terms "Employer" and "Workers" referenced in this Article 5.0, do not include the Prime Contractor's or the Designated Prime Contractor's Subcontractors or Suppliers, or their respective employees, workers, servants, agents or invitees.

Upon receipt of the Notice of Unsafe and Harmful Condition or Act, the Ministry Representative will issue to the applicable Employer an Order to Suspend Work at the location on the Site, or on the Specified Area, as applicable, that is specified in the Notice of Unsafe or Harmful Condition or Act.

The Province will be deemed to have relied on the terms of and reasons for the issuance of the Notice of Unsafe or Harmful Condition or Act, notwithstanding any subsequent investigation or inquiry of the matter by the Province, which the Province may but will not be obligated to undertake.

If the Prime Contractor, or the Designated Prime Contractor, as applicable, and the Employer referenced in section 5.1 fail to agree on the reasons for the issuance of the Notice of Unsafe or Harmful Condition or Act, then within one day of the issuance of the Notice of Unsafe or Harmful Condition or Act, the directive of the Prime Contractor, or the Designated Prime Contractor, to rectify the failure to comply with the Regulation or to act in accordance with the Base Safety Program, as the case may be, will be immediately implemented.

When the failure to comply with the Workers Compensation Act or the Regulation in accordance with the Base Safety Program stipulated in the Notice of the Unsafe or Harmful Condition or Act has been rectified by the Employer to whom it was given to the reasonable satisfaction of the Prime Contractor, or the Designated Prime Contractor, as applicable, the Prime Contractor, or the Designated Prime Contractor, as applicable, will immediately:

- withdraw the Notice of Unsafe or Harmful Condition or Act by endorsing on a copy thereof confirmation that the failure to comply with the Workers Compensation Act or the Regulation in accordance with the Base Safety Program has been rectified; and
- deliver the endorsed copy of the Notice of Unsafe or Harmful Condition or Act confirming the cancellation thereof of the applicable Employer and to the Ministry Representative.

The Ministry Representative will issue an Order to Resume Work on receipt of the endorsed copy cancelling the Notice of Unsafe or Harmful Condition or Act.

If the Prime Contractor or the Designated Prime Contractor, as applicable, is delayed in performing the Work as a result of being required to issue the Notice of Unsafe or Harmful Condition or Act and the Work is stopped pursuant to an

Order to Suspend Work under this Article, then the Completion Date will be extended by the number of days equal to the delay, as determined in the sole discretion of the Ministry Representative, and the Prime Contractor or the Designated Prime Contractor, as applicable, will not be entitled to any compensation, in damages or otherwise, including without limiting the generality of the foregoing, any claim for lost profits or other consequential loss, including business loss, as a result of or in connection with the issuance and operation of any Notice of Unsafe or Harmful Condition or Act or the issuance and operation of any Order to Suspend Work pursuant to this Schedule.

I6.0 CONTRACTOR OBLIGATIONS TO COORDINATE WITH THE DESIGNATED PRIME CONTRACTOR – THE SPECIFIED AREA

Not withstanding the Contractor's agreement to be the Designated Prime Contractor for the Specified Area pursuant to section 4.1 of this Schedule, the Contractor will continue to undertake and perform the obligations of a Prime Contractor at the Site at all times in accordance with the Workers Compensation Act, the Regulation and this Schedule.

If another contractor is appointed as the Designated Prime Contractor in connection with the Specified Area pursuant to section 4.1 of this Schedule, the Contractor will:

- continue to undertake and perform the obligations of a Prime Contractor at the Site at all times in accordance with the terms of the Workers Compensation Act, the Regulation and this Schedule;
- schedule and perform the Work and, in good faith, co-operate with the Designated Prime Contractor so as to comply with any directives that may be issued by the Designated Prime Contractor to coordinate the health and safety activities on the Specified Area;
- ensure that at all times all Employers, Workers, Subcontractors and Suppliers of the Contractor, and Other Persons comply with the Designated Prime Contractor's directions on coordinating occupational health and safety activities on the Specified Area;
- upon the request of the Designated Prime Contractor, deliver occupational health and safety records and documentation to the Designated Prime Contractor as necessary for the Designated Prime Contractor to meet its obligations under the Regulation and under this Schedule;
- advise the Designated Prime Contractor in writing and in advance of any work activities to be undertaken in the Specified Area that are likely to create a hazard for Workers of another Employer, and of the work activities;
- on receipt of notification from the Designated Prime Contractor of any unsafe or harmful condition or act by its Workers, Subcontractors, or Suppliers, or the Workers of its Subcontractors or Suppliers, investigate the reported situation and take immediate action to correct the condition or act, and report back to the Designated Prime Contractor, as may be required by the Designated Contractor;

- upon receipt of a Notice of Unsafe or Harmful Condition or Act from the Designated Prime Contractor and of an Order to Suspend Work from the Ministry Representative, take all steps to rectify, or cause to be rectified, the failure to comply with the Workers Compensation Act and the Regulation or to act in accordance with the Base Safety Program to the satisfaction of the Designated Prime Contractor;
- if the Contractor and the Designated Prime Contractor fail to agree on the reasons for the issuance of the Notice of Unsafe or Harmful Condition or Act within 1 (one) day of the issuance of the Notice of Unsafe or Harmful Condition or Act, immediately implement the directive of the Designated Prime Contractor to rectify the failure to comply with the Regulation or to act in accordance with the Base Safety Program, as the case may be; and
- advise the Designated Prime Contractor in writing of the name of the Qualified Person, and of any change in the Qualified Person, designated to be responsible for the Contractor's health and safety activities on or in connection with the Site, including the Specified Area.

The Province will be deemed to have relied on the terms of and reasons for the issuance of the Notice of Unsafe or Harmful Condition or Act notwithstanding any subsequent investigation or inquiry of the matter by the Province, which the Province may but will not be obligated to undertake.

Notwithstanding any other term of this Schedule or of the Agreement, the Province may withhold payment of any progress payment due to the Contractor under the Agreement. If the Designated Prime Contractor has issued, in connection with the Site or the Specified Area, as applicable, a Notice of Unsafe or Harmful Condition or Act in accordance with this schedule, and the Province may continue to withhold payment of such progress payment or payments, as the case may be, until such time as the Notice of Unsafe or Harmful Condition or Act has been cancelled and the Order to Resume Work has been issued.

I7.0 CONTRACTOR'S HEALTH AND SAFETY RECORDS

The Contractor will:

- establish and maintain at a location on the Site, or at a location off the Site that is satisfactory to the Province, accurate records, including supporting documents, relating to the implementation, operation, and maintenance of the Base Safety Program, and to any other occupational health and safety matters relating to the Work;
- notify the Province of the location referred to in subsection 7.1 a) of this Schedule not later than 5 (five) days after the Commencement Date; and
- permit the Province, its servants, employees and agents, at any time or times during normal business hours, to copy or audit, or both, any or all of the records, including supporting documents, referred to subsection 7.1 a) of this Schedule.

The records and documentation referred to in subsection 7.1 a) of this Schedule include, but are not limited to the following in relation to the Work, the Site and the Specified Area:

- the Base Safety Program;
- any and all notices, directives and inspection reports which have been delivered to the Workers Compensation Board by the Contractor or which the Contractor has received from the Workers Compensation Board;
- any and all written summaries of the particulars of any and all remedial actions taken by the Contractor to prevent the development or continuance of any risks, unsafe or harmful conditions or acts or hazards and to prevent the recurrence of such events; and
- minutes of and other documentation prepared in connection with or relating to safety meetings held between the Contractor and its Workers demonstrating that all Workers have and are receiving ongoing and adequate direction and instruction in the performance of their duties and the Work is being performed safely and without undue risk, and demonstrating the performance of regular inspections in accordance with and for the purposes stipulated in the Workers Compensation Act and the Regulation.

The delivery and progress payments by the Province to the Contractor under the Agreement is conditional on the prior submission to the Ministry Representative by the Contractor, on a monthly basis, of a written summary of the documents recorded and collected under section 7.2 and, if the Contractor is designated to act as the Designated Prime Contractor, a written summary of the actions taken by the Contractor to coordinate the occupational health and safety activities of the Employers, the Workers, and the Other Persons within the Specified Area

The Contractor will cause the Qualified Coordinator to obtain and will ensure that the Qualified Coordinator:

- obtains the records prepared with respect to the Joint Committee meetings held in connection with the Site; and
- distributes such records to the qualified persons, appointed in accordance with the Workers compensation Act and the Regulation, of other Employers on the Site, and as may be otherwise required by the Workers Compensation Act and the Regulation.

At all times during the Term, the Contractor will deliver to the Ministry Representative a copy of any accident or incident reports prepared by the Contractor in compliance with the Workers Compensation Act and the Regulation to the Ministry Representative when such reports have been completed.

The Contractor will provide the Ministry Representative with a statistical summary of all health and safety records applicable to the Site during the Term which summary entitled "Contractor's Accident and Statistics Summary Report" attached as in Appendix "C" to this Schedule, will provide particulars of the following information:

- the total number of hours worked by the Workers of the Contractor and the Workers of Subcontractors of the Contractor;
- the total number of occurrences or events which occurred on the Site that were reportable to or subject to the notification requirements of the Workers Compensation Act or the Regulation;
- the total number of person-days lost due to accidents, injuries or incidents; and
- the total actual cost of damage to equipment and materials due to accidents, injuries, or incidents.

Receipt and retention by the Province of the information and documentation listed above in this Article in no way constitutes approval of or authorization of the form, content or adequacy of such information and documentation on the part of the Province.

I8.0 HAZARD IDENTIFICATION FOR CONTRACTORS

The attached report "Hazard Identification for Contractors" dated January 2004 by Allman Safety Consulting Corp. is included in this Schedule for the Contractor's information. The Contractor shall be responsible for ensuring site safety and regulatory compliance as stipulated in the Contract.

MINISTRY OF TRANSPORTATION

WORK PACKAGE 2

HAZARD IDENTIFICATION FOR CONTRACTORS

January, 2004

Prepared by:
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HAZARDS OF FALLING

The existing highway is built in mountainous terrain. This results in a number of hazards of falling:

- 120 meters north of Ansell Place there is a riprap pile that has been created to support a utility pole. The South side of this riprap pile poses a hazard of falling.

- There is a steep slope 50 meters North of Five Kilometer Creek on the West Side of the highway that creates a hazard of falling.

- 100 meters north of Sculfield Creek on the West Side of the highway the steep slope creates a hazard of falling.

- At Montazambert Creek there is both a hazard of falling and a drowning hazard where the highway crosses the creek.

- The existing highway buttress No. 3633R on the West Side of the highway creates a hazard of falling.

- The large creek, which is presently being used as the location for the Emil Anderson trailer, creates both a hazard of falling and a drowning hazard.

- The existing highway buttress No. 3638R creates a hazard of falling.

- Charles Creek creates a hazard of falling and a drowning hazard where the highway crosses the creek.

- Turpin Creek creates a drowning hazard and hazard of falling where the highway crosses the creek.

- The culvert that is 100 meters north of Turpin Creek creates a hazard of falling on the West Side of the highway.

- This section of the highway from existing buttress No. 3639R North to the end of buttress No. 3640R is a continuous hazard of falling area.

- Newman Creek creates a hazard of falling and drowning hazard where the highway crosses the creek.

- Existing highway buttress No. 3644R creates a falling hazard on the West Side of the highway.

- Cosmo Creek creates a hazard of falling on the West Side of the highway where the highway crosses the creek.

- Lonetree Creek creates a hazard of falling and drowning hazard where the highway crosses the creek.

- Just south of Lions Bay there is a hazard of falling on the West Side of the highway where the high-tension powerline crosses the road.

RAIL HAZARDS

The existing highway parallels an active rail right-of –way. Trains and rail equipment on the tracks are an expected presence. Regardless of existing agreements, the contractor must liaise with the owner of the rail lines to establish safe operating procedures regarding encroachment.

DANGER TREES

For the most part, the existing highway passes through healthy second growth and mixed deciduous stands of trees. There are, however, some areas where the hazard requires a danger tree assessment:

- There is a 20-meter section on the East Side of the highway approximately 130 meters north of Ansell Place that requires a danger tree assessment.

- There is a 30-meter section on the East Side of the highway 50 meters past the old West Vancouver sign where the hazard requires a danger tree assessment.

- There is a 30-meter section on the East Side of the highway approximately 100 meters north of the existing highway buttress 3633R that requires a danger tree assessment.

CONFINED SPACES

Confined spaces include any space that is enclosed or partially enclosed, not intended for continuous human occupancy, large enough to enter to do work, and so configured that the access or egress restrictions would complicate provision of first-aid or the evacuation of an injured worker.

There are 4 confined spaces within the highway right-of-way:

- There is a manhole cover at Ansell Place that may lead to a space that meets the Workers' Compensation Board definition of a confined space.

- The 1.3-meter culvert at Disbrow Creek creates a confined space and drowning hazard.

- The 1-meter culvert at Five Kilometer Creek creates a drowning and confined space hazard

- The 1.3-meter culvert at Sculfield Creek creates a drowning and confined space hazard.

HAZARDS OF FALLING ROCK

This section of the highway has been posted as having hazards of falling rock. There are numerous locations throughout the worksite that pose a hazard of rock fall. These areas must be assessed for risk of rock fall prior to undertaking the work.

POWERLINES

There are a number of places where high-tension powerlines encroach on the roadway. In particular, there are number of places where these powerlines cross the existing highway:

- There are powerlines on the West Side of the highway at Ansell Place.
- The high-tension powerlines cross the highway approximately 100 meters north of Ansell Place.
- The high-tension powerlines cross the highway approximately 100 meters north of Sculfield Creek.
- Low-tension powerlines cross the highway 50 meters past existing buttress 3633R.
- The support wire for the high-tension powerline crosses the highway approximately 50 meters north of Charles Creek.
- The high-tension powerline crosses the highway approximately 200 meters north of Cosmo Creek.
- The high-tension powerline crosses the highway approximately 150 meters south of the observation monitoring well south of Lions Bay.

DEBRIS TORRENTS

There is a risk of debris torrents in the creeks starting at Montazambert Creek and continuing north for 22 kilometers. These debris torrents threaten the existing bridge structures and preclude all stopping on the bridges. A risk assessment for rainfall shutdown criteria must be completed prior to starting the work.

VEHICULAR TRAFFIC

The present highway services a number of communities. As a result there will be considerable vehicular traffic throughout the duration of the project. Workers may be exposed to the hazards of moving vehicles. A risk assessment must be completed prior to starting the work.

VIOLENCE

The nature of this project requires significant traffic control activities. Whenever the traveling public encounters traffic control persons, there is a potential for violence. A risk assessment for violence must be completed prior to starting the work.

SCHEDULE J: TRAFFIC MANAGEMENT

J. TRAFFIC MANAGEMENT

J1.0 PERMITTED TYPES OF TRAFFIC STOPPAGE

The Contractor is restricted to impacting public traffic within the permitted days and months as described in this section.

To define the permitted stoppages, the following area added to the Glossary of Terms:

DEFINITION OF STOPPAGES	
Random 20 Minute Stoppage(s):	means a scheduled stoppage of traffic of no more than 20 minutes in one or both directions for the purpose of blasting rock or other Work.
Random 10 Minute Stoppage(s):	means a brief stoppage of traffic of no more than 10 minutes in one or both directions.
Random 2 Minute Stoppages:	means a very brief stoppage of traffic of no more than 2 minutes in one or both directions.
Free Flow Traffic:	means when the traffic queue is cleared.

J2.0 PERMITTED STOPPAGES FOR MONTHS AND DAYS OF THE YEAR

Ref: SS 194 – Traffic Management for Work Zones

Further to SS 194.30, Tables J-2-1 and J-2-2 show the permitted days and months of the year for Stoppages on Highway 99 that shall be used by the Contractor as the basis for the development of the Traffic Management Plan.

The stoppage windows identified in Tables J-2-1 and J2-2 show times, days, and months when Stoppages of all durations are not permitted. Work in time periods shown as "Not Permitted" shall not result in delays to traffic.

The time restrictions are based on typical daily traffic flows. The hours shown in the tables may be reduced at the discretion of the Ministry Representative in consideration of circumstances including, but not limited to, excessive traffic delays, special events, incidents or accidents. No additional payment will be considered when the hours and/or days of work are reduced.

Table J-2-1: Allowable Months of Year

Type of Stoppage	Effective Dates for Stoppages	
	March 1, 2004 to November 30, 2004	December 1, 2004 to February 28, 2005
Random 20 Minute Stoppage Daytime	See Table J-2-2	Not Permitted
Random 20 Minute Stoppage Night-time	See Table J-2-2	Not Permitted
Random 10 Minute Stoppage	See Table J-2-2	Not Permitted
Random 2 Minute Stoppage	See Table J-2-2	See Table J-2-2

Note: The dates of Table J-2-1 represent days in years 2004 and 2005. Similar patterns are required for subsequent years.

Table J-2-2: Allowable Stoppage Durations, Start Times and Windows

Type of Stoppage	Stoppage Duration	Allowable Start Times and Stoppage Windows	
		Monday to Thursday(1)	Friday to Sunday(1)
Random 20 Minute Stoppage Daytime	20 minutes	10:00 am to 2:00 pm	Not Permitted
Random 20 Minute Stoppage Night-time	20 minutes	10:00 pm to 6:00 am(2)	Not Permitted
Random 10 Minute Stoppage Daytime or Night-time	10 minutes	9:00 am to 5:00 pm & 8:00 pm to 6:00 am(2)	9:00 am to 12:00 noon Friday
Random 2 Minute Stoppage Daytime or Night-time	2 minutes	9:00 am to 5:00 pm & 8:00 pm to 6:00 am(2)	9:00 am to 12:00 noon Fri 9:00 am to 5:00 pm Sat & Sun 10:00 pm to 6:00 am for all 3 days

(1) When a Statutory Holiday or a Special Event occurs see Clause J4.9

(2) The end of the Stoppage window would fall on the next day. For example, a Thursday 10:00 pm start for a **Random 20 Minute Stoppage Night-time** would finish Friday at 6:00 am.

J3.0 STOPPAGE COMPLIANCE

If the actual stoppage duration resulting from a stoppage is longer than the accepted duration as provided in the Traffic Management Plan, or the resulting delay to traffic is longer than the accepted duration as provided in the Traffic Management Plan, the stoppage will be considered to be non-compliant. The stoppage will be considered to be over once the highway is opened to traffic in both directions. A Free Flow Traffic condition exists once traffic is no longer delayed.

After a stoppage is declared non-compliant, the Contractor shall review the Traffic Management Plan and, if applicable, the Blasting Plan to determine the cause and prevent future non-compliances. The Contractor shall revise the Traffic Management Plan according to the Contract requirements and submit it to the Ministry Representative for review. Only after the Traffic Management Plan has been judged by the Ministry Representative to be compliant with the Contract requirements will the Contractor be permitted to continue with stoppages. No further stoppages or interruptions will be permitted until the Traffic Management Plan has been revised and accepted.

J4.0 CONDITIONS FOR STOPPAGES

Stoppages are permitted during the day and night-time windows with each window having different conditions. The permitted windows allowed for stoppages and openings are fixed. The Contractor shall adhere to the established times for starting and ending stoppages. The length of the windows cannot be adjusted other than as described in this Appendix. After a stoppage is complete, lanes shall be opened to clear traffic queues in both directions simultaneously.

J4.1 Random 20 Minute Stoppages – Daytime

Stoppages shall only occur during the windows identified in Table J-2-1 and only one Random 20 Minute Stoppage shall be permitted in each hour. Stoppages shall not exceed the durations permitted in Table J-2-2. The Contractor shall determine the stoppage duration in accordance with the Contract requirements, but the stoppage duration shall not exceed 20 minutes and the associated queue clearing time shall not exceed 10 minutes. The Contractor shall plan and coordinate Random 20 Minute Stoppages so that every attempt is made to have traffic stoppages consistently start on the hour.

The procedure for the execution of a Random 20 Minute Stoppage up to a maximum of 20 minutes during the day is described in Clause J4.3.

J4.2 Random 20 Minute Stoppages – Night-time

Stoppages shall only occur during the windows identified in Table J-2-1 and they shall not exceed the duration permitted in Table J-2-2. Random 20 Minute Stoppages during the night are permitted during the period 10:00 pm to 6:00 am.

The Contractor shall open the highway to traffic before 6:00 am if no further work is being undertaken that prohibits the safe passage of vehicles through the work zone.

During the allowable work windows, and once traffic queues have been cleared throughout the Project, Single Lane Alternating Traffic will be permitted provided the stoppage of traffic in any one direction does not exceed 10 minutes as described in Clause J4.7. If the traffic queues cannot be cleared within these times, the Contractor will immediately remove the single-lane alternating regime and open both lanes of the road to traffic.

As described in Table J-2-2, the first available stoppage for the week is Monday at 10:00 pm. However, a Stoppage period is permitted from Monday 3:00 am to 6:00 am only if it is not a Statutory Holiday or Special Event as described in Clause J-4.9 in this Section.

J4.3 Execution of Stoppages During Day Windows

Due to the varying nature of the rock excavation within the project limits and the associated impact on the travelling public, the Contractor shall develop and follow a performance-based process in which testing of rock blasting occurs before implementing the maximum permitted stoppage duration. The Contractor shall develop a progressive testing procedure that considers all aspects including, but not limited to, traffic management, rock blasting, physical relationship between the highway and blast location, natural conditions of the rock, and volume of blasted material. The Contract shall include the progressive testing procedure as part of the Traffic Management Plan.

The Contractor's progressive testing procedure shall take into account the number of steps required and the number of tests at each step.

The Contractor will be permitted to proceed to the maximum permitted stoppage duration of 20 minutes only after it has successfully completed the intermediate test steps and stoppage durations to the satisfaction of the Ministry Representative. After successful testing of the maximum Random 20 Minute Stoppages, or lesser stoppage duration if chosen by the Contractor, the Ministry Representative will permit the Contractor to continue with the chosen stoppage duration until a non-compliance occurs.

Should a non-compliance occur, the Contractor shall review and resubmit the Traffic Management Plan and Blasting Plan, as described in Clause J3 in this Section to determine the cause of the non-compliance.

The Contractor shall develop a progressive testing procedure as described when any one of the following occurs:

1. Non-compliant stoppages.
2. Changes in natural rock characteristics such as geology, faults and fractures.
3. When a new rock excavation location or face is initiated.

4. When the proximity of the rock excavation to the travelled roadway or height of rock excavation changes, either of which may not permit continuation of the current stoppage duration.
5. As required by the Ministry Representative.

All conditions in Clause J4.1 of this Section shall apply during the progressive testing process.

J4.4 Conditions for Random 10 Minute Stoppages

Random 10 Minute Stoppages are permitted within the identified windows, but stoppage duration shall not exceed 10 minutes. The window when the public may encounter Random 10 Minute Stoppages shall be identified in the Traffic Management Plan. The Contractor shall immediately end Random 10 Minute Stoppages when the queued traffic is stopped longer than 15 minutes, or when requested to do so by the Ministry Representative. Conditions of Clause J3 in this Section apply when the duration of a Random 10 Minute Stoppage exceeds 10 minutes in duration or traffic is delayed longer than 15 minutes.

Blasting operations are only permitted during Stoppages and will not be permitted during Random 10 Minute Stoppages, unless directed otherwise by the Ministry Representative.

J4.5 Conditions for Random 2 Minute Stoppages

Random 2 Minute Stoppages are permitted within the identified windows and stoppages shall not exceed 2 minutes. The window when the public may encounter Random 2 Minute Stoppages is to be identified in the Traffic Management Plan. Conditions of Clause J3 in this Section apply when the duration of a Random 2 Minute Stoppages exceeds 2 minutes.

Random 2 Minute Stoppages are not permitted on the Statutory Holidays or Special Event Days as described in Clause J4.9 in this Section.

J4.6 Frequency of Random 10 Minute and 2 Minute Stoppages

After a Random 10 Minute or 2 Minute Stoppage is complete, traffic lanes shall be opened to clear traffic queues in both directions simultaneously. The frequency of delays experienced by the travelling public shall not result in a cumulative delay to traffic greater than 15 minutes for Random 10 Minute Stoppages and 5 minutes for Random 2 Minute Stoppages. Should a single-lane-alternating regime be in place, Clause J4.7 in this Section shall apply. Frequency of stoppages and resulting delays shall be included in the Traffic Management Plan as accepted by the Ministry representative. All conditions of Clause J4.9 in this Section shall apply.

J4.7 Conditions for Single Lane Alternating Traffic

Single lane closures resulting in alternating traffic will be permitted during the following times only:

a) During the work window 10:00 am to 2:00 pm, between the Random 20 Minute Stoppages during the day, only after traffic queues resulting from the Random 20 Minute Stoppage are cleared and a free flow period is initiated where traffic is not delayed, or

b) During the work window 10:00 pm to 6:00 am, for Random 20 Minute Stoppages during the night, only after traffic queues resulting form the Random 20 Minute Stoppage are cleared and a free flow period is initiated where traffic is not delayed, or

c) During the windows when Random 10 Minute Stoppages are permitted, or

d) During the windows when Random 20 Minute Stoppages, day or night, are permitted if the Contractor does not elect to initiate a Random 20 Minute Stoppage.

In all cases the Traffic Management Plan will address the impact to traffic due the initiation of Single Lane Alternating Traffic. The Contractor shall not initiate a single-lane-alternating regime if it is estimated that the resulting delay durations will be greater than permissible for the permissible stoppages. This estimation shall take into account the length of the work zone and cycle times. If at any time the queue lengths do not allow full clearing of stopped traffic within the single cycle or lane movement and the stoppage durations in Table J-4-2 are exceeded, the Contractor shall immediately make both lanes available to the traffic until such time as Single Lane Alternating Traffic can be reinstated without exceeding the permitted stoppage duration.

At any time the Ministry Representative may require Single Lane Alternating Traffic to be halted and all lanes made available to the travelling public.

J4.8 Simultaneous Stoppages and Interruptions

The Contractor shall take into account the overall delay durations resulting from initiating more than one stoppage. Simultaneous stoppages are allowed within the permitted stoppage windows described in Table J-4-2. The cumulative delay within project limits shall not exceed 15 minutes. Should a single-lane-alternating regime be in place, Clause J4.7 in this Section will apply. The frequency of stoppages, simultaneous effect of stoppages, and resulting queue clearing times shall be included in the Traffic Management Plan accepted by the Ministry Representative. All conditions of Clause J3 in this Section shall apply.

J4.9 Statutory Holidays and Special Events

The Contractor shall not undertake any work which introduces delays to the travelling public on the Statutory Holidays and Special Events identified in Table J-4-3, notwithstanding the windows and times described in Clause J2 in this Section. Days and time periods when traffic cannot be impacted are as follows:

Table J-4-3: Restrictions on Stoppages

Holiday or Event	Restrictions on Stoppages
Statutory Holiday or Special Event falls on Monday	No stoppages are permitted from the previous Friday, 12:00 noon to Monday, 12:00 midnight
Statutory Holiday or Special Event falls on Friday	No stoppages are permitted from the previous Thursday, 12:00 noon to Sunday 12:00 midnight
Statutory Holiday or Special Event falls on Tuesday, Wednesday, or Thursday	No stoppages are permitted from the previous day, 12:00 noon to 12:00 midnight the day of the Statutory Holiday or Special Event
Spring Break	No stoppages are permitted on Saturday and Sunday before and after the week event, but Random Minor Interruptions only are permitted Monday to Friday according to Table J-2-2.

Table J-4-4 represents the Statutory Holidays and Special Events that are to be considered. The Contractor shall follow the same days for subsequent years in developing the Traffic Management Plan.

It is anticipated that unforeseen Special Events may occur within the Sea-to-Sky corridor, where permitted delays will excessively impact traffic. The Contractor shall anticipate that four of these special events will occur each year when the Ministry will reserve the right to direct the Contractor to eliminate all stoppages and initiate free-flow traffic for a 24 hour period from midnight to midnight.

No additional payment will be considered when permitted stoppages are eliminated for these unforeseen events and the Proponent shall include all costs of them in its Proposal. These events are considered to be excluded from claim for reimbursable delay.

Table J-4-4: Canadian and American Statutory Holidays and Special Events

Canada	USA
New Year's Day	New Year's Day
Spring Break	Martin Luther King Jr. Day
Good Friday	Good Friday
Easter Monday	Easter Monday
Victoria Day	President's Day
Canada Day	Memorial Day
British Columbia Day	Independence Day
Labour Day	Labour Day
Thanksgiving Day	Columbus Day
Remembrance Day	Veterans Day
Christmas Day	Thanksgiving Day plus the following day
Boxing Day	Christmas Day
	Boxing Day

J5.0 TRAFFIC MANAGEMENT PLAN

J5.1 The Contractor's Responsibilities for Traffic Management

The Contractor acknowledges that compliance with the requirements of the Contract regarding the public and traffic is fundamental to the satisfactory discharge of its responsibilities under the Contract. It also represents that it has taken these requirements into account and has included all costs thereof in preparing its Proposal, and undertakes that fulfilment of these requirements will be central to its planning and conduct of the Work.

The Contractor shall take steps to rectify the situation immediately if:

1. Any aspects of the Traffic Management Plan, including sub-plans, results in traffic impacts and reductions in performance outside of the limits identified in the Contract
2. The Contractor has failed to provide for the safe passage and control of traffic
3. The Contractor has failed to correct immediately an unsatisfactory condition upon being so directed by the Ministry Representative

This appendix provides further details of the requirements of the Traffic Management Plan, the Contractor's traffic resource requirements, accommodation of emergency vehicles, and the traffic management process.

The Ministry has publicized potential traffic delays as a planning tool for transportation stakeholders and the travelling public. In the event of a discrepancy between the duration of publicized delays and this Appendix, the latter shall prevail.

J5.2 Traffic Management Plan General

Ref: ***SS 194 – Traffic Control for Work Zones***
SS 204 – Rock Cuts

The Traffic Management Plan shall be fully integrated with the Contractor's applicable General Construction Plan provided in accordance with SS 204.04.05, and with the applicable blast design as provided by the Contractor in advance of each blast in accordance with SS 204.04.07 and shall be approved by the Ministry Representative.

The Contractor shall be responsible for all aspects of traffic management associated with the Work. The Contractor shall restrict traffic delays to the travelling public in accordance with the allowable stoppages outlined in this RFP.

The Contractor shall provide to the satisfaction of the Ministry Representative qualified Traffic Control Supervisors, as detailed in SS 194.04, and a qualified Professional Traffic Engineer. The Contractor shall identify both the Traffic Control Supervisors and Traffic Engineer at the pre-construction meeting.

All traffic control measures shall be in accordance with this Section, the *Traffic Control Manual for Work on Roadways* (TCM), *Traffic Management Guidelines for Work on Roadways* (TMG) and SS194. In the case of conflict, the TCM will prevail over SS194 and the publications cited therein.

These standards are modified as shown below.

Further to TCM 1.2.3: Responsibility	the Contractor is assigned such responsibility for, and shall at all times make provision for, traffic through the Work to a sufficiently high standard in accordance with this RFP to ensure the convenience and safety of public, vehicular and pedestrian traffic, the safety of the workers on the Site and the protection of the Work.
Further to TCM 1.4: Traffic Control (Work) Zones	any one or more of the advance warning area, transition area, buffer space, work area and termination area of the traffic control Work Zone may be outside the Limits of Construction, but this shall in no way diminish the Contractor's responsibility to meet the requirements of the TCM.
Further to TCM 1.5: Installation, Maintenance and Inspection of Traffic Control	Construction signs specific to an operation shall be either removed or effectively covered so that their message is obscured whenever the operation is not in progress

Capitalized Terms used in this Clause will have the meaning ascribed in the Glossary of Terms, the TCM, or the Transportation Association of Canada (TAC) *Geometric Design Guide for Canadian Roads*.

The Contractor shall designate a Traffic Control Supervisor (TCS), acceptable to the Ministry who has the Contractor's authority to respond to traffic control requirements and who shall personally perform all the duties of the TCS, in accordance with this RFP.

The Contractor shall also designate a Traffic Engineer who has the Contractor's authority to review and seal the Traffic Management Plan and associated sub-plans and take responsibility for ensuring that all traffic engineering issues and requirements are taken into account.

J5.3 Traffic Management Plan Requirements

Further to SS 194.11, the Ministry has assessed this project to be a Category 4 Project in accordance with Part 2, Clauses 4 to 6, of the TMG. The Contractor shall prepare the Traffic Management Plan in accordance with the Ministry definitions and guidelines provided in the TMG. The following traffic management sub-plans are required in accordance with the TMG for the Contractor's Traffic Management Plan:

- Traffic Control Plan
- Incident plans
- Implementation plan
- Public Information Plan

Further to the Category 4 Traffic Management Plan requirements in the TMG, the Contractor shall conduct a traffic analysis on the traffic control plans for each stage of the construction works. The traffic analysis shall identify the current hourly traffic volumes and determine the effect of each traffic control plan on the capacity and operation of the roadway, including the resulting vehicle delays and queue lengths. The traffic analysis shall be conducted for the hours and days that each traffic control plan will be in operation

Each sub-plan shall be prepared, submitted for the Ministry Representatives review before the planned start of any Work. The initial Incident Plans shall be prepared to address the general requirements of the entire Project. For each stage of the Work that affects traffic, the Contractor shall prepare a customized Traffic Control Plan that addresses stage-specific activities and requirements. For major staging events and if deemed necessary by the Ministry, the Contractor shall prepare a stage-specific Incident Plans.

The Contractor shall prepare a weekly construction schedule five days in advance that documents the anticipated construction activities used to develop the Traffic Management Plan. The schedule shall provide brief descriptions of the traffic control activity (e.g. lane stoppage, lane shift, detour), its location, approximate implementation date and duration. The schedule shall be provided to the Ministry Representative on a weekly basis.

J6.0 RISK ASSESSMENT

Further to SS 194.11, the Ministry has performed a risk assessment and identified risks that shall be considered in the Contractor's Traffic Management Plan. These include but are not limited to the following:

a) Physical Risks

- falling rocks, excavated material and other objects
- BC Hydro power lines
- roadway surface condition during construction
- winter lay-up
- lane widths

b) Work Risks

- nature of work activity
- equipment movement through work zone
- storage of equipment or materials
- night-time work

c) Traffic Risks

- abandoned/immobilized vehicles
- accommodation of emergency vehicles
- cyclist through traffic
- vehicles queue hazards
- posted speed through work zone
- traffic impacts extend beyond work zone
- volume/capacity ratio and traffic delays
- impact of special events
- public advisory signing
- statutory holidays

Further definitions of these risks are contained in the *Traffic Management Guidelines for Work on Roadways.*

Notwithstanding the risk assessment performed by the Ministry, the Contractor shall perform an independent assessment of the project to identify any other risks not identified by the Ministry, or special conditions that are to be addressed to the Ministry's satisfaction by the Contractor's Traffic Management Plan. The Contractor shall identify all risks and state the measures to be implemented to manage or eliminate the risks.

J7.0 TRAFFIC MANAGEMENT PLAN SUBMISSION AND REVIEW

Contrary to the time review periods in SS 194.12, the Traffic Management Plan and sub-plans shall be submitted to the Ministry Representative for review and acceptance before the commencement of the Work as follows:

- All Traffic Management sub-plans shall be submitted simultaneously. The Traffic Control Plan, Public Information Plan, Incident Plans, and Implementation Plan shall be submitted to the Ministry Representative at least 20 working days before the start of any Work.
- Any modifications to any plan shall be submitted at least 10 days before any change being made in the field.
- Where changes on the Site are required immediately, the TCS, with approval from the Ministry Representative, shall revise the appropriate sub plan for the immediate change and issue a revision to the sub plan within three working days.

The Traffic Management Plan, fully integrated with the Construction Schedule, shall address the number and scheduled date of all allowed scheduled stoppages for the balance of the contract period. It shall also address all other minor traffic delays.

The Contractor shall not work on any operation affecting traffic without a current reviewed Traffic Management Plan, including Traffic Control Plan approved and sealed by the Traffic Engineer, Implementation Plan, and Incident Plans. The Ministry will not be liable to the Contractor for the Ministry's decision not to accept any one of the sub-plans. This cannot under any circumstances be the basis of a claim by the Contractor.

J8.0 CONTRACTOR'S TRAFFIC CONTROL SUPERVISOR(S)

Further to SS 194.04, a Traffic Control Supervisor (TCS) shall be on Site full time while Work is underway. The TCS shall have direct line authority over all of the Contractor's traffic control personnel and procedures on the Site. The Contractor shall not designate the Site Superintendent as the TCS. The TCS may have other duties; however, traffic supervision shall be his/her primary responsibility.

The duties of the TCS shall include:

a) Finalizing proposed traffic control measures as approved by the Traffic Engineer and directing the implementation of the approved TCP.

b) Ensuring that appropriate minor modifications are made to the approved TCP and are approved by the Traffic Engineer if the specified traffic control measures are not achieving the desired effect. The TCS shall mark-up the approved TCP to indicate all modifications, as installed, and maintain a complete record of all original and modified TCPs, a copy of which shall be provided to the Ministry Representative.

c) Directing all traffic control operations on the Site and coordinating with other contractors for any adjacent construction or maintenance operation.

d) Liaising with the Ministry Representative as required.

e) Directing the Contractor's Incident Plans. The TCS shall report immediately to the Ministry Representative on traffic/construction incidents involving damage, injuries or fatalities, or on complaints from residents or the travelling public. The TCS shall ensure that the Incident Management Report is accurately completed for traffic/construction incidents involving damage, injuries or fatalities. The form shall be submitted to the Ministry Representative by the next working day.

f) Directing the installation, maintenance and inspection of all traffic control measures, in accordance with TCM 1.5.

g) Inspecting night-time lighting and minimizing the impact of its glare on the travelling public.

h) Recording the actual duration of delays and forwarding on a daily basis to the Ministry Representative for review.

i) Monitoring queue lengths during active construction and implementing appropriate measures when such queues become excessive or as directed by the Ministry's Representative or designate.

j) Documenting traffic control measures and activities in accordance with Clause J11 of this Section.

k) Inspecting the condition of all temporary signs and ensuring that these are maintained in accordance with Clause 1.5.2 of the TCM. Overseeing all requirements of the Contract that contribute to the convenience, safety, and orderly movement of vehicular and pedestrian traffic.

l) Attending weekly meetings with the Contractor and Ministry Representative to discuss traffic control for the following week. In addition the TCS shall attend all Project meetings with corridor stakeholders, as identified by the Ministry Representative, where the Traffic Management Plan and traffic control is discussed.

m) Communicating updates to the Ministry Representative and commenting on the Traffic Management Plan as part of a Project related meeting.

n) Submitting to the Ministry Representative a daily log of all delays and opening times, plus a report summarizing traffic queue lengths, traffic control issues; number and nature of calls from the general public; and, action(s) proposed or taken in consultation with the Ministry Representative. This information shall be made available to the Ministry Representative upon request.

The Contractor shall designate an alternate TCS who shall assume the duties of the primary TCS in the event of that person's inability to undertake the primary role. Such alternate TCS shall be adequately trained and qualified to the same degree as the primary TCS.

Traffic control supervision shall be provided by the TCS on Site on a 24 hours per day basis whenever there is active construction under way. During non-work periods the TCS shall be on-site within 45 minutes after notification. Once on Site the TCS shall commence with the implementation of appropriate traffic control measures as defined in the approved Traffic Management Plan. The TCS shall have appropriate personnel and equipment available on call, at all times.

The Contractor shall provide a vehicle for the TCS on Site. The vehicle used by the TCS shall be equipped with a roof or post-mounted flashing amber light visible for 360 degrees.

J9.0 TRAFFIC ENGINEER

Further to SS 194.11, the Contractor shall retain a qualified Traffic Engineer eligible for registration with APEGBC, or an individual with equivalent experience subject to the Ministry's approval, in accordance with the *Traffic Management Guidelines for Work on Roadways*, who is responsible for designing, sealing and approving the Traffic Control Plan(s). The Traffic Engineer shall a have a minimum of five years of relevant construction related traffic engineering experience on high volume rural roadway projects in Canada or abroad.

J10.0 QUALITY OF TRAFFIC MANAGEMENT

J10.1 Contractor Responsibilities

The Contractor shall be responsible for quality control with respect to all activities affecting the Traffic Management Plan. The Traffic Control Supervisor, as described in Clause J8 of this Section, shall be responsible for acting on the results of quality reviews undertaken by the Ministry Representative and acting on the recommendations. The Traffic Management Plan shall be included in the Construction Quality Management Plan.

J10.2 Ministry Responsibilities

The Ministry Representative will review all sub-plans within the Traffic Management Plan as Work proceeds. The Ministry will not be liable to the Contractor for additional Work resulting from the Ministry's request to rectify deficiencies.

J11.0 TRAFFIC CONTROL PLANS

J11.1 Acceptance of Traffic Control Plans

The Traffic Engineer shall approve the Contractor's Traffic Control Plan(s) before submitting it to the Ministry Representative with the overall Traffic Management Plan for review.

J11.2 Traffic Control Personnel Qualifications

All traffic personnel shall be qualified in accordance with WCB regulations.

J11.3 Documentation

The Contractor shall document traffic control measures and activities in accordance with Clause 1.5.3 of the *Traffic Control Manual for Work on Roadways* (except that photo logging is not required). This shall include completion of the following records:

- Traffic Control Supervisor's Daily Activity Report
- Incident Management Report
- Traffic Control Supervisor's Daily Report of Traffic Control

Forms that may assist in keeping the above records may be found in the *Traffic Management Guidelines for Work on Roadways.*

J11.4 Traffic Control Devices

a) Construction and Advisory Signs

Supply, installation, maintenance and removal of all works-related to signing shall be the responsibility of the Contractor and shall be considered incidental to the Work. The location and type of each sign shall be indicated on the Traffic Control Plan, for each stage of the Work.

Signs shall be checked daily for legibility, damage, suitability and location. Signs and delineators shall be cleaned as frequently as necessary to ensure full legibility and reflectance.

Sign supports for lane closure shall be "Windmaster" type or approved equivalent, complete with "high level warning devices".

b) Changeable Message Signs (CMS)

Further to SS 194.46, the Contractor shall provide a minimum of two portable CMSs and shall use the signs to provide advance notification of changes, such as planned traffic pattern changes. Sign locations and messages shall be shown on the Traffic Control Plan. In addition, the Contractor shall use the CMSs to provide notification of incidents or unplanned traffic pattern changes, as deemed necessary by the Incident Plans and as requested by the Ministry Representative.

Each portable CMS, when in operation, shall be a minimum of 2 m from the bottom of the sign display to the road surface, and shall be level and capable of pivoting for sighting purposes.

The specifications of the sign are as follows:

Sign unit:	Yellow LED display
Sign display:	3 lines with 8 characters per line
Character size:	450 mm
Character matrix:	5 x 7
Remote dial-up access:	By cellular phone or equivalent (where "shadows" in cellular coverage exist, the Contractor shall manually control electronic messages on a timely basis)

A full matrix sign may be used provided it has the display parameters noted above.

Contrary to the last sentence in SS 194.46, the Contractor shall be responsible for providing appropriate and timely means to display and/or change messages on the CMS when the Contractor is not on Site.

J11.5 Detours

Section J11.5 herein replaces SS194.27 Detours.

The minimum design requirements for a two-lane detour are provided in the following table.

Design Speed/Posted Speed	50 km/hr or as approved by the Ministry
Design Vehicle	TS7
Maximum Grade	8% on highway, 12% on cross streets
Maximum Superelevation	6%
Vertical Clearance	5.0 m (or existing)
Lane Width	Existing or minimum 3.25 m travel lanes
Shoulder (Open)	Existing or 0.5 m (minimum) paved
Shoulder (Closed by Barrier)	Existing or 0.4 m (minimum) paved

The Contractor shall prepare an engineering design for the detours, including lane shifts, that shall conform with the design requirements. The engineering design shall provide detail design drawings for construction that will include the design speed, the horizontal and vertical geometry, plus evidence that the design vehicle is accommodated for all movements and that all the requirements of this Appendix J are satisfied. The engineering design shall be submitted to the Ministry Representative a minimum of fourteen (14) days in advance of building the detour. The Ministry Representative will review the design drawings for compliance only. Once the Ministry accepts the design drawings, the Contractor shall have the "For Construction" design drawings signed and sealed by a professional engineer.

Where detours and lane shifts are required for the execution of the work, the Contractor shall provide a paved surface to facilitate passage of traffic around the restricted construction area. The Contractor shall be responsible for signs, maintenance of same and maintenance of the detour or temporary road.

The Contractor shall consider the condition of the pavement used for detours and its impact on the safety and function of the detour. Different pavement surface conditions, such as non-uniform and uneven pavement, may create confusion to drivers. On some pavement surfaces permanent markings that have been effectively removed for dry daylight conditions may under wet conditions still appear to be in place. Where these conditions are anticipated or found to exist, the Contractor shall provide either a new pavement lift or milled surface to form a uniform surface and eradicate pavement markings.

The detours shall be provided with adequate drainage facilities to prevent pooling and flow of water across the highway. Milled surfaces upon which traffic is to run shall be clean and allow adequate drainage. Where the detour shifts lanes toward the upslope rock face and alters the existing drainage system, the Contractor shall design and construct drainage facilities to adequately accommodate storm water runoff.

The temporary directional dividing lines shall be supplemented with raised pavement markers at a spacing of 2 m, and they shall be reflective yellow bi-directional markers. For milled pavement surface, pavement markings shall utilize "L" shaped flexible reflectorized markers. The Contractor shall re-apply temporary pavement markings and raised pavement markers, when it is deemed necessary by the Ministry Representative, due to fading and damage.

The Contractor shall provide illumination along the entire length of the detour. The luminaries shall be Cobra Head style roadway type fixtures with 400-watt high pressure sodium clear lamp and a Type IV distribution pattern. The luminaries shall be mounted between 10 and 12 m above the roadway and spaced at approximately 60 m. The illumination shall provide a minimum 1.0 footcandle and a uniformity ratio of 1:3.

J11.6 Concrete Roadside Barrier Requirements

The Contractor shall install as a minimum requirement temporary barriers:

- Between (detour) traffic and median wall construction;
- Between (detour) traffic and rock cut excavations;
- To meet drop off delineation requirements of TCM 1.20.8;
- Where required by the Contractors' TCP, and
- At locations where required by the Ministry representative

The Contractor may use existing barriers for temporary detours. Existing barrier units damaged during usage for temporary detours shall be disposed off-site in accordance with SS145.27.02 and replaced by the Contractor at no cost to the Ministry. All temporary barriers shall be installed so as to provide a minimum shy distance of 0.4 m between the lane line and the barrier edge. In curves, the barrier shy distance shall be designed by the Traffic Engineer to accommodate the appropriate stopping sight distance for a minimum 50 km/hr design speed.

Traffic barriers used for temporary detours and lane shifts, or used for the protection of the Site, shall be continuous or adequately protected by terminals, flares or impact attenuators to current Ministry standards, (NCRHP Report 350). Temporary barriers shall also have reflectors installed in accordance with the Ministry's *Manual of Standard Traffic Signs and Pavement Markings*.

Where barrier is placed on both sides of the roadway, adequate provision for drainage and removal of snow and ice will be made as required by the season and weather conditions.

J11.7 Drop-offs

The Contractor shall conduct all operations to minimize any drop-offs (abrupt changes in roadway elevation) left exposed to traffic during non-working hours. Unless otherwise specified in the TCP, drop-offs left exposed to traffic during non-working hours shall be delineated as follows:

a) Drop-offs up to 60 mm, unless otherwise specified on the TCP, may remain exposed with appropriate traffic control devices alerting motorists of the condition. However, no drop-offs shall be allowed between adjacent lanes of traffic.

b) Drop-offs more than 60 mm, that are in the roadway or shoulder shall be delineated with appropriate traffic control devices and further delineated as indicated in c.2) below. The Ministry will consider the use of channelizing devices as listed in c.2) provided the Contractor's TCP can demonstrate its effectiveness and the drop-off is less than 100 mm.

c) Drop-offs more than 60 mm, but not more than 300 mm, that are not within the roadway or shoulder shall be delineated with appropriate traffic control devices and further delineated by having one of the following:

   1. A wedge of compacted stable material (25 mm well graded base course aggregate or better) placed at a slope of 4 :1 or flatter.
   2. Channelizing devices (Type 1 barricades, plastic safety drums, or other devices 1 m or more in height) placed along the traffic side of the drop-off

and a new edge of pavement stripe placed a minimum of 2 m from the drop-off. Appropriate traffic control devices shall be placed in advance of and throughout the drop-off treatment.

3. Temporary concrete barrier or other approved barrier installed on the traffic side of the drop-off with 300 mm between the drop-off and the back of the barrier and a new edge of pavement stripe a minimum of 500 mm from the face of the barrier. An approved terminal, flare or impact attenuator shall be required at the beginning of the section. For night use, the barrier shall have reflective markers and/or warning lights.

d) Drop-offs more than 300 mm not within the roadway or shoulder shall be delineated with appropriate traffic control devices and further delineated as indicated in Clauses c.1, c.2, or c.3 if all of the following conditions are met:

1. The drop-off is less than 600 mm,
2. The drop-off does not remain for more than three consecutive days,
3. The drop-off is not present on any Canadian Statutory/Civic Holidays and
4. The drop-off is only on one side of the roadway.

e) Drop-offs more than 300 mm that are not within the roadway or shoulder and are not otherwise covered by Clause d) above shall be delineated with appropriate traffic control devices and further delineated as indicated in Clauses c.1 or c.2.

f) Open trenches within the pavement and shoulder shall have a steel plate cover placed and anchored over them. A wedge of suitable material, if required, shall be placed to provide a smooth transition between the pavement and the steel plate. Excavations within the Roadway shall be backfilled and paved to match the existing grade before returning the lane to traffic.

g) All areas of excavation and their proposed safety measures shall be shown in the TCP.

All areas of excavation and their proposed safety measures shall be shown in the TCP.

J11.8 Accommodation of Cyclists

The Contractor shall make provision for bicycles to have safe access through the work in accordance with the stoppages identified.

J11.9 Temporary Pavement Markings

Further to TCM 2.2.1, the Contractor shall be responsible for the application and removal of all temporary pavement markings and reflective devices. Permanent paint lines shall be applied to the final pavement surface within 24 hours of placement of the final pavement.

When traffic lanes are to be redefined for Long Duration Work (more than one daytime shift), the Contractor shall eradicate all redundant temporary or permanent pavement markings that are not required for the intended traffic patterns and install alternative markings.

Notwithstanding SS 194.45, the Contractor shall supply all temporary pavement marking. The material used for temporary pavement markings shall be paint with glass bead or thermoplastic marking supplemented with raised pavement markers.

The Contractor shall apply all final pavement markings in accordance with the Signing and Pavement Markings Drawings.

J11.10 Completed Sections of New Roadway

Sections of new Roadway which are completed before the physical completion of all the Work shall be delineated with flexible drums and Class 1 barricades in an alternating pattern as indicated in the Contractor's TCP.

J12.0 INCIDENT PLANS

The Contractor shall organize and implement an Incident Management Plan and Incident Response Plan in accordance with *Traffic Management Guidelines for Work on Roadways*. The primary objectives of an Incident Management Plan and Incident Response Plan are to facilitate incident response and move traffic safely and expeditiously through or around the incident. The plans shall specify how the Contractor shall provide access for emergency vehicles and assistance to emergency response personnel. An incident includes, but is not limited to, passage of emergency vehicles, motor vehicle accidents, emergency road repairs, disabled vehicles, and debris on the road. The immediate response to an emergency must by necessity make use of available devices and equipment.

The Contractor shall contact fire and emergency services forces through the Traffic Control Supervisor. In anticipation of the requirement for emergency vehicles to pass through the project site, the Contractor shall have adequate equipment and labour available to clear a passage should a stoppage be in effect. The Traffic Control Supervisor shall be notified of the event by emergency services forces as soon as possible, and the Contractor shall act immediately in securing safe passage. The Contractor shall have adequate resources available to ensure safe passage is provided within 20 minutes of notification.

The Contractor is to provide reliable communications during blasting, with backup, between the Traffic Control Supervisor and Ministry Representative. The same communication devices shall also be accessible to the appropriate emergency services providing clear three-way communications. The Traffic Control Supervisor shall provide prior notice of delays to emergency services a week in advance.

The Contractor shall offer assistance to the driver of any motor vehicle that is stopped within the project limits, or outside of the project limits as described in the Traffic Management Plan. The following types of assistance shall be provided, as appropriate: travel information, tire changing assistance, pushing of vehicle to safe refuge, arrangement for towing assistance and placement of safety flares and cones.

For unoccupied vehicles and for any vehicle that cannot move under its own power after assistance, police and a towing service shall be notified immediately. The dates and time of assistance for any event shall be recorded in a logbook, as well as the time that police and towing service were notified.

Details of the Incident Plans shall be coordinated with the Traffic Control Plan. The Incident Plans shall include procedures for coordination with fire and emergency services.

J13.0 IMPLEMENTATION PLAN

The Contractor shall prepare and submit an Implementation Plan in accordance with the *Traffic Management Guidelines for Work on Roadways.* This Plan shall identify the Traffic Control Supervisor and the Traffic Engineer for these works, along with the qualifications and experience of those named individuals. This Plan shall also define processes to ensure that the Traffic Control Plan and Incident Plans are developed and implemented efficiently and appropriately, and that they are kept up-to-date with necessary modifications during construction.

J14.0 PUBLIC INFORMATION PLAN

The Contractor shall prepare and submit a Public Information Plan in accordance with the *Traffic Management Guidelines for Work on Roadways.* This Plan shall ensure that the Ministry Representative is kept informed of planned traffic pattern changes, including, but not limited to, the following: detours, lane shifts, lane closures, access restrictions, schedule changes and other traffic control procedures which may delay traffic or disrupt traffic flow. Procedures for disseminating information related to unplanned traffic pattern changes (e.g. due to incidents such as emergency repairs, motor vehicle accidents) shall be addressed by the Contractor in the Incident Plans.

The Contractor shall coordinate traffic control procedures with the Ministry Representative, other contractors and/or Ministry crews who are working in the Highway 99N corridor from Squamish to Whistler of the Project in order to eliminate concurrent delays.

The Contractor shall be responsible for all advance notification and arrangements required to inform the Ministry Representative of planned changes in traffic patterns caused by the Work.

The Contractor shall organize and implement an Advisory Signing Plan. The primary objective of an Advisory Signing Plan is to notify the traveling public in advance of the Contractor's scheduled stoppages.

Included in the Advisory Signing Plan is the supply and installation of temporary project information signs on Highway 99N approximately 1.0 km from each construction limit to notify traffic of time and date of lane stoppages. The signs shall provide current information throughout the duration of the project. Each sign shall be fully reflective, 1220 mm by 2440 mm in size, and shall have the wording as agreed to by the Ministry Representative.

J15.0 LOCATION AND STORAGE OF MATERIALS AND EQUIPMENT

Unless protected by barrier or impact attenuators, materials and equipment shall not be stored within the Clear Zone of the travelled portion of any roadway.

J16.0 SPEED LIMITS AND SAFE PASSAGE THROUGH THE SITE

Further to Clause 1.4.6 of the *Traffic Control Manual for Work on Roadways,* the Ministry at its discretion will determine speed limits within the Site.

Reduction in speed limits will only be permitted where:

a) It is not practicable to achieve a design speed equal to the existing posted speed on a temporary Detour, and where approved by the Ministry, a Construction Speed Zone shall be established and an appropriate lower speed limit shall be posted through the temporary alignment during the whole period that it is in operation.

b) As approved by the Ministry, a Temporary Speed Zone has been established within active Work Zones for Short Duration Work (not more than one shift), but only during the hours that the condition exists.

J17.0 WORK ZONE SIGN SHEETING

The Contractor shall provide construction signs that incorporate "encapsulated lens sheeting", identified by the honeycomb pattern, (except the C-27 which requires "prismatic lens" sheeting which is identified by the diamond shaped pattern).

All conditions as described the 1999 update for the *Traffic Control Manual for Works on Roadways*, Section 2.1.1 General under *Illumination and Reflectorization* apply to this Contract, which includes the requirement for all "C" series sign sheeting to be "encapsulated lens sheeting".

J18.0 OBSTRUCTION OF TRAFFIC

It is a condition of this Agreement that the Contractor is solely responsible for maintaining the flow of traffic through the Site during the Term in accordance with the Contract.

Except where otherwise specifically permitted either by the Agreement or by prior written permission of the Ministry Representative, whenever, in the opinion of the Ministry Representative, the Contractor causes or permits, either through action or inaction, a traffic stoppage or any other unauthorized traffic delay in any part of the Site, in the form of a lane closure or lane obstruction, the Ministry will require the Contractor to pay a Traffic Disruption Charge based on an assessment made by the Ministry Representative.

The Traffic Disruption Charge payable by the Contractor will apply to all stoppages, during the day and night. The Traffic Disruption Charge payable by the Contractor for each of these stoppages will be:

a) For any period of time beyond the allowable stoppage duration up to a total of 5 minutes in duration: ($1,000.00).

b) For the next 10 minutes of time beyond (a): (each 1 minute interval, or portion thereof x $1,000.00).

c) For the amount of time beyond 15 minutes: (each 1 minute interval, or portion thereof x $1,200.00).

Payments otherwise due to the Contractor under the Agreement will be reduced by the amount of the Traffic Disruption Charge.

When the time of an actual stoppage is longer than the permitted stoppage duration and Traffic Disruption Charges are assessed, the stoppage is considered to be non-compliant and all conditions of Clause J3 apply.

Should Random 2 Minute Stoppages not be reliably controlled to keep within the allowable scheduled stoppage duration of 2 minutes, the use of Random 2 Minute Stoppages will not be permitted.

J19.0 STANDARD DOCUMENTS

The standard documents as listed in SS 194.03 shall also include SS 204: Rock Cuts.

SCHEDULE K: PAYMENT ADJUSTMENTS

K. PAYMENT ADJUSTMENTS

K1.1 CONSIDERATION FOR EARLY SUBSTANTIAL COMPLETION

The consideration granted to the Contractor for early Substantial Completion under the terms of the Agreement will be four thousand dollars ($4,000.00) per day.

K1.2 MAXIMUM CONSIDERATION FOR EARLY COMPLETION

The maximum consideration granted to the Contractor for early Substantial Completion under the terms of the Agreement will be five percent (5%) of the Contract Price as known at the time of Award.

K2.1 CONSIDERATION FOR LATE SUBSTANTIAL COMPLETION

The consideration assessed against the Contractor for failure to meet the Substantial Completion Date under the terms of the Agreement will be eight thousand dollars ($8,000.00) per day.

K2.2 MAXIMUM CONSIDERATION FOR LATE SUBSTANTIAL COMPLETION

The maximum consideration assessed against the Contractor for failure to meet the Substantial Completion Date under the terms of the Agreement will be five percent (5%) of the Contract Price as known at the time of Award.

SCHEDULE L:
NOT USED

L. NOT USED

SCHEDULE M:
STANDARD SPECIFICATIONS

M. STANDARD SPECIFICATIONS

Link to Standard Specifications:

http://www.th.gov.bc.ca/Publications/const_maint/contract_serv/const_files_2003/2004StdSpec.pdf

SCHEDULE N:
LIST OF DOCUMENTS PROVIDED BY THE MINISTRY

N. LIST OF DOCUMENTS PROVIDED BY THE MINISTRY

N1.0 CATEGORY CODES USED TO SORT INFORMATION

DD = Test Section Detailed Design
LP = Legal Plans
MP = Orthophotos and Mapping
PA = Preliminary Alignment and Studies for EA Application
PD = Preliminary Design
RC = Record Drawings
RF = Other Documents
ST = Other Studies

N2.0 INFORMATION ISSUED AT RFP PRE-SUBMISSION MEETING (9-FEB-04)

Category	Information issued at RFP Pre-submission meeting (9-Feb-04) Title	OE Document No.	e-copy	Paper copy
	RFP drawings - Site Plan Drawing numbers: WP2-RFP-0101 to WP2-RFP-0110 (rev 0)	-		Y
	RFP drawings - Available Right-of-Way Drawing numbers: WP2-RFP-3001 to WP2-RFP-3010 (rev 0)	-	Y	Y
	RFP Scope Description	-		Y
PA	CD-ROMs: SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION WITH ECOSYSTEM MAPPING (AUG03) 2CDs	RFMOT-0289	Y	
DD	STS TEST SECTION GOLDER GEOTECHNICAL REPORTS • "Supplemental Information Geotechnical Investigation, Analysis and Detailed Design Input to the Test Section, Stations 105+560 to 106+560, Section 2 of the Sea to Sky Highway Project", dated August 29, 2003. • "Geotechnical Investigation, Analysis and Detailed Design Input to the Test Section, Stations 105+560 to 106+560, Section 2 of the Sea to Sky Highway Project", dated July 23, 2003.	Part of 016315-CD-0013	Y	
DD	STS TEST SECTION DETAILED DESIGN DRAWINGS (CROSS SECTIONS & STRUCTURAL DWGS incl) (17SEP03)	Part of 016315-CD-0013	Y	Y

Category	Information issued at RFP Pre-submission meeting (9-Feb-04) Title	OE Document No.	e-copy	Pape copy
DD	STS TEST SECTION DETAILED DESIGN MONTIZAMBERT CUT AND NORTHBOUND HIGHWAY NOT INCLUDED IN TEST SECTION, ISSUED FOR INFORMATION ONLY (Associated Engineering) (Jan 2004)			Y
DD	UPDATED ROCK CUT STABILITY ANALYSIS FOR DETAILED DESIGN TEST SEC STNS 105+560 TO 106+560 SEC 2 STS HWY(GOLDER)(01OCT03)	099CS3003-0040	Y	
DD	RELIABILITY AND SEISMIC DEFORMATION ANALYSIS FOR PROPOSED MSE WALLS ON ROCKFILL SLOPES TEST SECT 2(GOLDER)(01OCT03)	099CS3003-0041	Y	
DD	REQUEST FOR PROPOSAL (RFP), TEST SECTION – MONTIZAMBERT CREEK TO STRIP CREEK (18SEP03) (RFP documents Parts 1, 2, &3)	RFMOT-0318	Y	
PD	DIGITAL TERRAIN MODEL OF GROUND SURFACE – compiled from Associated Engineering preliminary design and MoT data. (contained in zip file WP2_DTM.zip)		Y	
PD	PRELIM DESIGN REPORT 100% SUBMISSION – Associated Engineering (excluding Appendix E, cost estimates) SUNSET BEACH TO KELVIN GROVE (SEPT03)	Prelim_Design-Rpt_SB-KG_1.pdf	Y	Y
PD	PRELIM DESIGN 20m X-SECTIONS, 103+960 to 110+720 on 11x17 sheets. (Associated Engineering – Nov 10, 2003)	Part of 099CS-3003-0006		Y
PD	PRELIM DESIGN DRAWING SET, SUNSET BEACH TO KELVIN GROVE (Associated Engineering) (JAN04)			Y
PD	FACTUAL REPORT ON GEOTECHNICAL INVESTIGATION SECTION PD2 SEA TO SKY HIGHWAY PROJECT (GOLDER) (in progress JAN 2004) – Executive Summary, Table of Content, Figures 1A to 1J ONLY.			Y
	End of section 2, Information issued at RFP Pre-submission meeting (9-Feb-04)			

N3.0 RELEVANT INFORMATION ISSUED ON FEB.20, 2004

Category	Information issued on Feb. 20, 2004 Title	OE Document No.	e-copy	Paper copy
MP	SURVEY AND MAPPING REPORT - HORSESHOE BAY TO WHISTLER - ZONES A, B, C, D & E WITH CD-ROM (SNC) (Feb27, 2004)	016315-40RS-0007-PB	Y	
MP	SEA TO SKY HIGHWAY SURVEY CONTROL - REVISED REPORT (McElhanney) (Nov 2002)	099CS3002-0014	Y	
PA	PRELIMINARY ALIGNMENT REPORT VOLUME 1- HORSESHOE BAY TO WHISTLER - SEA TO SKY IMROVEMENTS (FINAL) (SNC) (JUN 2003)	016315-40RS-0005-Rev.0 - Vol 1	Y	
PA	PRELIMINARY ALIGNMENT REPORT VOLUME 2 - HORSESHOE BAY TO SQUAMISH, PRELIM. ALIGNMENT DRAWINGS (FINAL) (SNC)(JUN 2003)	016315-40RS-0005-Rev.0 - Vol 2	Y	
PA	DISPOSAL AT SEA REGULATIONS AND PERMITTING REGULATIONS., ENVIRONMENTAL ASSESSMENT OF BEDROCK EXCAVATION, RE-USE AND DISPOSAL (GOLDER) (SEPT 2002)	RFMOT-0142	Y	
PD	REPORT ON: RESULT OF GEOTECHNICAL INVESTIGATION SECTION PD2 STS HIGHWAY IMPROVEMENT PROJECT – 2 VOLUMES. (GOLDER) (16FEB04)	RFGOLDER-0010-01	Y	
PD	PRELIMINARY GEOTECHNICAL DESIGN, STS PROJECT, HWY 99N (SECTION S) ANSELL PLACE TO LIONS BAY (GOLDER) (16JUN03)	099CS3003-0005	Y	
PD	GEOTECHNCIAL INVESTIGATION AND RISK ASSESSMENT OF CONSTRUCTING RETAINING WALLS ON FILL SLOPES, STS HIGHWAY UPGRADE PROJECT (GOLDER)(22MAY03)	099CS3003-0014-02	Y	
PD	DEBRIS FLOW RISK ASSESSMENT DISBROW CREEK, SECTION 2 - SUNSET BEACH TO LIONS BAY (GOLDER)(19AUG03)	099CS3003-0020-02	Y	
PD	CD-ROM: VALUE ANALYSIS INFORMATION PACKAGE - SECTION 2 – (Associated Engineering) (March 2003)	099CS3003-0013	Y	
PD	VALUE ANALYSIS REPORT FOR SUNSET BEACH TO LIONS BAY HWY 99 NORTH - DRAFT (APRIL 7, 2003)	RFVMI-0002-01	Y	
PD	DRAFT VA RESPONSE FOR PRELIMINARY DESIGN HWY 99 SECTION 2 W/ ATTACHMENTS (Associated Engineering) (APRIL 21, 2003)	099CS3003-0016	Y	
PD	7 HOUR TRAFFIC COUNT ON OCT 11/02 AT LAWRENCE WAY, STRACHAN POINT OCEAN POINT & KELVIN GROVE (JAN03)	099CS3003-0024	Y	

Category	Information issued on Feb. 20, 2004 Title	OE Document No.	e-copy	Paper copy
PD	CD-ROM: REVISED MEMO & HCS FILES - HWY 99 SUNSET BEACH TO LIONS BAY PRELIMINARY DESIGN SECTION PD2 (CTS) (12NOV03)	099CS3003-0043	Y	
RC	SUNSET HIGHLANDS INTERCHANGE (UNITED PROPERTIES LTD.)- 1 SET (45-11x17 drawings)	099CS3002-0013	Y	
RC	DWGS: SUNSET HIGHLANDS INTERCHANGE COMPLETION OF WESTERN RAMPS(200, 300 & 600 LINES)(McELHANNEY)(IFC-02MAY03)	099CS3003-0019	Y	
RC	CONDITION INSPECTION REPORTS FROM THE BRIDGE MGT INFO SYS (BMIS)- STRIP CR; LONE TR CR; NEWMAN CR; MONTI CR; CHARLES CR.	RFMOT-0256	Y	
RF	MOT TECHNICAL CIRCULAR T-2/92: SEISMIC DESIGN AND REHABILITATION CRITERIA - FEB 14, 1992	RFMOT-0325	Y	
ST	TRAFFIC VOLUME ANALYSIS SUMMARY REPORT (DRAFT) (JULY 2003)	016315-40RS-0010-PB	Y	
ST	HORSESHOE BAY TO WHISTLER - ROAD FEATURE INVENTORY (RFI)	RFMOT-0148	Y	
ST	CONTEXT SENSITIVE DESIGN ENGINEERING PRACTICES - DESIGN GUIDELINES FOR THE HWY 99 STS CORRIDOR - FINAL REPORT (NOV 2002)	RFMOT-0162	Y	
ST	ROCK FALL CONTAINMENT FOR ROCK CUTS HWY 99 - HORSESHOE BAY TO WHISTLER (WYLLIE & NORRISH - OCT 18/02)	RFMOT-0168	Y	
ST	DWGS: MoT's 1982 MAPPING FOR HWY 99 CORRIDOR FROM HORSESHOE BAY TO SQUAMISH (SOUTH OF STAWAMUS RIVER)	RFMOT-0169	Y	
ST	SUMMARY OF PRELIMINARY RESULTS - PD2, SUNSET BEACH TO LIONS BAY - DRAFT (PAUL DE LEUR & T. SAYED)(15MAY03)	RFMOT-0272-01	Y	
ST	CD-ROM: HWY # 99 - BRUNSWICK PIT CAPACITY VOLUME ESTIMATES (RF BINNIE) (18JUN03)	RFMOT-0287	Y	
	End of section 3, Information issued on Feb. 20, 2004			

N4.0 RELEVANT INFORMATION, AVAILABLE FOR VIEWING ON MARCH 8, 2004

Category	Relevant Info, available for viewing on March 8, 2004 Title	Document No.	Viewing Room Box. No.
LP	HIGHWAY PLAN 52 - SQUAMISH HWY FR. SOUTH BOUNDARY OF DISTR. LOT 430 TO S. BOUNDARY OF LOT 1, PLAN 7016 IN DISTR. LOT 2365 (MAY 2 1963)	RFMOT-0178	
LP	HIGHWAY PLAN 47 - PLAN OF SQUAMISH HWY THRU DISTR. LOTS 2156,2151,2155,2154,2363,1575 BLOCKS A & B 6631(JUL 13 1962)	RFMOT-0183	
LP	PLAN 18530 - POSTING PLAN OF LOTS 1 TO 101 INCL. IN PART OF DL 1575 & IN PART OF BLOCK 'B' DL 1575 & IN PART OF BLOCK 'A' (JUN 17 1982)	RFMOT-0184	
LP	REFERENCE PLAN 12950 (HP47) (PORTIONS OF LOTS 2149, 2150, 2151, 2152, 2153, 2157 & 2158) (JUN 3 1976)	RFMOT-0188	
LP	HIGHWAY PLAN 45 - SQUAMISH HIGHWAY FROM S. BOUNDARY LOT 1, PLAN 7016 IN DL 2365 TO N. BOUNDARY OF DL 2153 (APR 2 1962)	RFMOT-0205	
LP	CROWN LAND REGISTRY FOR DISTRICT LOTS (D.L) ALONG SEA TO SKY CORRIDOR (MAR 2003) - PROPERTY SERVICES, SOUTH COAST REGION	RFMOT-0247	
LP	PERMISSION TO CONSTRUCT, USE AND MAINTAIN ACCESS TO PROVINCIAL HWY(STS HWY 99) AND ON SUNSET HIGHLANDS INTERCHANGE	RFMOT-0248	
LP	PLAN LMP 46951 - SUBDIVISION PLAN OF A PORTION OF BLK G, DL 2361 (ANSELL PLACE) (JUL 17 2000)	RFMOT-0259	
MP	ORIGINAL COLOURED AERIAL PHOTOS FROM HORSESHOE BAY TO SQUAMISH (1 SET)	RFMOT-0212	
PA	SEA-TO-SKY HIGHWAY IMPROVEMENT ENVIRONMENTAL ASSESSMENT PRESENTATION (DISPLAY PANELS)	EAO Presentation	
PA	DWGS: SITE LOCATION MAPS - USED BY COAST RIVER TO RECORD WATERCOURSE CONDITIONS DURING THEIR FIELD VISITS	RFCOAST-0001	
PA	BC HYDRO 69KV LINE UPGRADE, HORSESHOE BAY TO SQUAMISH - INFO ON FEATURES ALONG BC HYDRO RIGHT-OF-WAY	RFCOAST-0002	
PA	CD-ROM: ENVIRONMENTAL ASSESSMENT OF BEDROCK EXCAVATION, RE-USE AND DISPOSAL, STS HWY, HORSESHOE BAY TO SQUAMISH	RFGOLDER-0002	
PA	FEASIBILITY LEVEL ASSESS OF THE STABILITY AND CONSTRUCTIBILITY OF A PROPOSED ROCKFILL TO WIDEN HWY99 (NOV 2002)	RFGOLDER-0004	

Category	Relevant Info, available for viewing on March 8, 2004 Title	Document No.	Viewing Room Box. No.
PA	SUMMARY OF PUBLISHED GEOLOGY AND FIELD MAPPING RESULTS, PROPOSED SEA TO SKY PARKWAY,HB TO SQ (GOLDER)(JAN 2003)	RFMOT-0064	
PA	REPORT ON ACID DRAINAGE & METAL LEACHING POTENTIAL, PROPOSED SEA TO SKY PARKWAY, HB TO SQ (GOLDER) (JAN 2003)	RFMOT-0079	
PA	PROVINCIAL HIGHWAY ROCKFALL ACTIVITY MAPPING - HORSESHOE BAY TO SQUAMISH (HWY 99)	RFMOT-0141	
PA	ENVIRONMENTAL ASSESSMENT OF ARD/ML EFFECTS FROM BEDROCK EXCAVATION, RE-USE & DISPOSAL - HB TO SQ (GOLDER)(FEB 2003)	RFMOT-0152	
PA	REPORT ON PRELIM. ASSESSMENT OF STABILIZATION REQUIREMENTS FOR BC RAILWAY ROCK SLOPES (DEC 2002)	RFMOT-0208	
PA	HYDROLOGY ASSESSMENT RELATED TO THE HWY 99 IMPROVEMENT PROJECT, PREPARED BY GOLDER (JAN 14, 2003)	RFMOT-0216	
PA	WATER QUALITY STUDY - SEA TO SKY HIGHWAY IMPROVEMENT PROJECT (R. BUCHANAN) (MAR 2003)	RFMOT-0223	
PA	ASSESSMENT OF OPTIONS FOR UTILIZATION OF EXCAVATED ROCK PROPOSED STS PARKWAY HB TO SQ (GOLDER) (MAR 2003)	RFMOT-0224	
PA	DWG: PRELIM. ALIGN.-TYPICAL DEBRIS TORRENT BARRIER WALL PROFILE (LOCATION AS SHOWN)	RFMOT-0231	
PA	DWG: PRELIM. ALIGN.- DEBRIS TORRENTS: DISBROW CREEK PLAN LAYOUT PHASE 1 - SHORT TERM CONCEPTUAL DESIGN	RFMOT-0232	
PA	DWG: PRELIM. ALIGN.- DEBRIS TORRENTS: DISBROW CREEK PLAN LAYOUT PHASE 2 - LONG TERM CONCEPTUAL DESIGN	RFMOT-0233	
PA	DWG: PRELIM. ALIGN.- DEBRIS TORRENT: SCLUFIELD CREEK/UNNAMED CREEK NO. 1 PLAN LAYOUT PHASE 1 - SHORT TERM CONCEP. DESIGN	RFMOT-0234	
PA	DWG: PRELIM. ALIGN.- DEBRIS TORRENT: SCLUFIELD CREEK/UNNAMED CREEK NO. 1 PLAN LAYOUT PHASE 2 - LONG TERM CONCEP. DESIGN	RFMOT-0235	
PA	DWG: PRELIM. ALIGN.- DEBRIS TORRENT: TURPIN CREEK PLAN LAYOUT CONCEPTUAL DESIGN	RFMOT-0236	
PA	VOLUME 1 - THE PROJECT; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG03)	RFMOT-0290	
PA	VOLUME 2 - BIOPHYSICAL; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG03)	RFMOT-0291	
PA	VOLUME 3 - SOCIO-COMMUNITY; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG03)	RFMOT-0292	
PA	VOLUME 4 - CONSULTATION; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG03)	RFMOT-0293	

Category	Relevant Info, available for viewing on March 8, 2004 Title	Document No.	Viewing Room Box. No.
PA	VOLUME 5 - SUMMARY; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG003)	RFMOT-0294	
PA	VOLUME 1 - MAP AND DRAWING FOLIO; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG03)	RFMOT-0295	
PA	VOLUME 2 - MAP AND DRAWING FOLIO; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG03)	RFMOT-0296	
PA	VOLUME 3 - MAP AND DRAWING FOLIO; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG03)	RFMOT-0297	
PA	NAVIGABLE WATER ASSESSMENTS, STS HWY 99 HORSESHOE BAY TO WHISTLER (JULY 30, 2003)	RFMOT-0310	
PA	VOLUME 1 - APPENDICES; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG 03)	RFMOT-0313	
PA	VOLUME 2 - APPENDICES; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG 03)	RFMOT-0314	
PA	VOLUME 3 - APPENDICES; SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT APPLICATION (AUG 03)	RFMOT-0315	
PA	MOT'S STANDARD SPECIFICATIONS FOR PROTECTION OF THE ENVIRONMENT, SECTION 165 (2003)	RFPAR-0004	
PD	VALUE ANALYSIS INFORMATION PACKAGE: PLAN AND PROFILE PLOT; CROSS SECTIONS - SECTION 2 SUNSET BEACH TO LIONS BAY (AE) (March 2003)	099CS3003-0012	
RC	Dwg. 91674 Montizambert Creek Bridge Foundation Investigation	91674	RFMOT-0244
RC	Dwg. 92043 Lone Tree Creek Bridge Foundation Investigation Squamish Hwy.	92043	RFMOT-0244
RC	Dwg. 92044 Lone Tree Creek Bridge Cross Sections Showing Bedrock Squamish Hwy	92044	RFMOT-0244
RC	Dwg. 92045 Lone Tree Creek BridgeTest Hole Logs Squamish Hwy. 1 of 2	92045	RFMOT-0244
RC	Dwg. 92046 Lone Tree Creek Bridge Test Hole Logs Squamish Hwy 2 of 2	92046	RFMOT-0244
RC	Dwg. 92048 Strip Creek Bridge #1433Foundation Investigation Squamish Hwy	92048	RFMOT-0244
RC	Dwg. 92050 Strip Creek Bridge Test Hole Logs Squamish Hwy. 1 of 2	92050	RFMOT-0244
RC	Dwg. 92051 Strip Creek Bridge Test Hole Logs 2 of 2	92051	RFMOT-0244
RC	HWY 99 - MONTIZAMBERT CREEK (NORTH VANCOUVER DISTRICT) SEISMIC REFRACTION INVESTIGATION	RFMOT-0302	
RC	BRUNSWICK PIT DEVELOPMENT PLAN, PROFILE & TYPICAL 1988	RFMOT-PL-0110	40

Category	Relevant Info, available for viewing on March 8, 2004 Title	Document No.	Viewing Room Box. No.
RC	BRUNSWICK PIT DEVELOPMENT PLAN, CROSS SECTIONS 1988	RFMOT-PL-0111	40
RC	MONTIZAMBERT CREEK SEISMIC LINE LOCATIONS OLD ALIGNMENT FUTURE 4 LANE ALIGNMENT TEMP 2 LANE ALIGN. 47+40-59+00	RFMOT-PL-0246	42
RC	Dwg. 552 Horseshoe Bay to Squamish HwyHorseshoe Bay to Lions Bay Section Sht. 1 of 7	90280	RFMOT-0244
RC	Dwg. 552 Horseshoe Bay to Squamish Hwy.Horseshoe Bay to Lions Bay Section Sht. 2 of 7	90281	RFMOT-0244
RC	Dwg. 552 Horseshoe Bay to Squamish Hwy.Horseshoe Bay to Lions Bay Section Sht. 3 of 7	90282	RFMOT-0244
RC	Dwg. 552 Horseshoe Bay to Squamish Hwy.Horseshoe Bay to Lions Bay Section Sht. 4 of 7	90283	RFMOT-0244
RC	Dwg. 552 Horseshoe Bay to Squamish Hwy.Horseshoe Bay to Lions Bay Section Sht. 5 of 7	90284	RFMOT-0244
RC	Dwg. 552 Horseshoe Bay to Squamish Hwy.Horseshoe Bay to Lions Bay Section Sht. 6 of 7	90285	RFMOT-0244
RC	Dwg. 552 Horseshoe Bay to Squamish Hwy.Horseshoe Bay to Lions Bay Section 7 of 7	90286	RFMOT-0244
RC	Dwg. 91672 Site Plan	91672	RFMOT-0244
RC	Dwg. 91677-1 Horseshoe Bay to SquamishNewman Creek to Harvey Creek, Rock Cuts #2 & 3 Site Plan	91677	RFMOT-0244
RC	Dwg. 91678-2 Horseshoe Bay to SquamishNewman Creek to Harvey Creek, Rock Cut # 4 Site Plan	91678	RFMOT-0244
RC	Dwg. 91679-3 Horseshoe Bay to SquamishNewman Creek to Harvey Creek, Rock Cut # 1 Site Plan	91679	RFMOT-0244
RC	Dwg. 92049 Strip Creek Bridge #1433Cross Sections Squamish Hwy.	92049	RFMOT-0244
RC	North Van DistrictGaribaldi Hwy.99Newman Creek BridgeReinforced Earth Abutment WallsPlan, Section, Details	84325-001	
RC	North Van DistrictGaribaldi Hwy.99Newman Creek BridgeReinforced Earth Abutment WallsFront Elevation-South Abutment Walls	84325-002	
RC	North Van DistrictGaribaldi Hwy.99Newman Creek BridgeReinforced Earth Abutment WallsFront Elevation-North Abutment Walls	84325-003	
RC	Garibaldi Highway 99Reinforced Earth Retaining WallsL-S & L-NPlan & Sections	84350-001	
RC	Garibaldi Highway 99Reinforced Earth Retaining WallL-S Front Elevation	84350-002	
RC	Garibaldi Highway 99Reinforced Earth Retaining WallL-N Front Elevation, Sheet 1 of 2	84350-003	
RC	Garibaldi Highway 99Reinforced Earth Retaining WallL-N Front Elevation, Sheet 2 of 2	84350-004	

Category	Relevant Info, available for viewing on March 8, 2004 Title	Document No.	Viewing Room Box. No.
RC	Garibaldi Highway 99Reinforced Earth Retaining WallL-100 NPlan, Elevation & Bridges	84350-005	
RC	Garibaldi Highway 99Reinforced Earth Retaining WallL-100 SPlan & Section	84350-006	
RC	Garibaldi Highway 99Reinforced Earth Retaining WallL-100 S Front Elevation	84350-007	
RC	Garibaldi Highway 99Newman CreekChannelization, Bridge & ApproachesSTA.80+60 to STA.90+50	Drawing 1 of 10	
RC	Volume Overhaul DiagramsRetaining Walls	Drawing 10 of 10	
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RC	DESIGN FILE , BOOK CASE	RFMOT-PL-0259	49
RC	PLANS (SEPIAS SHOWING FIELD RUN LINE) RACK 1 (APR 1 1987)	RFMOT-PL-0260	49

Category	Relevant Info, available for viewing on March 8, 2004 Title	Document No.	Viewing Room Box. No.
RC	REVISED BRIDGE DRAWINGS @ NEWMAN CREEK (MAR 28 1985)	RFMOT-PL-0261	49
RC	R/W PLAN FOR BRIDGE SITE (AUG 15 1984)	RFMOT-PL-0271	49
RC	HORSESHOE BAY TO SQUAMISH FULL SIZE DRAWINGS (DEC 2001)	RFMOT-PL-0284	50
RC	HORSESHOE BAY TO SQUAMISH PROFILES (DEC 2001)	RFMOT-PL-0285	50
RC	HORSESHOE BAY TO SQUAMISH AND SQUAMISH TO WHISTLER KEY PLANS	RFMOT-PL-0286	50
RC	HORSESHOE BAY -SQUAMISH SECTIONS 1-7 & PROFILES (DEC 2001)	RFMOT-PL-0287	50
RC	HORSESHOE BAY - SQUAMISH KEY PLAN (1:10,000) ROUGH COPY SHOWING ACCESSES (JUN 1988)	RFMOT-PL-0297	51
RC	HORSESHOE BAY TO BRITANNIA CR., KEYMAP (MAY 30 1988)	RFMOT-PL-0304	51
RC	HORSESHOE BAY - NEWMAN CREEK	RFMOT-PL-0307	52
RC	NEWMAN CREEK - "M" CREEK	RFMOT-PL-0308	52
RF	UTILITY POLICY MANUAL - UPDATE # 4 - MAY 1998 REVISION	RFMOT-0278	
RF	TRAFFIC MANAGEMENT GUIDELINES FOR WORK ON ROADWAYS (SEPT 2001)	RFMOT-0312	
RF	REVISED POLICY FOR MITIGATING THE EFFECTS OF TRAFFIC NOISE FROM FREEWAYS AND EXPRESSWAYS - SUMMARY (NOV 1993)	RFWAKE-0003	
ST	PROJECT SCOPE DEVELOPMENT REPORT - STS CORRIDOR IMPROVEMENTS (DRAFT) (NOV 2002)	016315-40RS-0002-PA	
ST	CONCEPTUAL ALIGNMENTS EVALUATION REPORT, SEA TO SKY CORRIDOR IMPROVEMENTS (AUG 2003)	016315-40RS-0003-PC	
ST	BC RAIL DETOUR CONCEPT DEVELOPMENT STUDY - STS CORRIDOR IMPROVEMENTS (AUG 2003)	016315-40RS-0011-Rev. 0	
ST	SEA TO SKY HIGHWAY PROJECT REPORT (KLOHN LEONOFF STUDY - FEB 1991) in assoc. with Bukland and Taylor & Graeme and Murray	RFKLOHN-0001	
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCTIONAL DESIGN - SUMMARY REPORT (DEC 92)	RFKLOHN-0003	
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCL DESIGN - GEOLOGICAL/GEOTECHNICAL/HYDRAULIC ENG. (APPENDIX A) VOL 1	RFKLOHN-0004	
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCTIONAL DESIGN - HIGHWAY ENGINEERING (APPENDIX F) VOL 1	RFKLOHN-0005	

Category	Relevant Info, available for viewing on March 8, 2004 Title	Document No.	Viewing Room Box. No.
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCL DESIGN - GEOLOGICAL/GEOTECHNICAL/HYDRAULIC ENG. (APPENDIX A) VOL 2	RFKLOHN-0006	
ST	STS HWY CAULFIELD INTRCHG TO FURRY CREEK FUNCL DESIGN - BRIDGES & VIADUCTS(APN C) RETAINING WALLS (APN D) TUNNELS (APN E)	RFKLOHN-0007	
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCTIONAL DESIGN - CONSTRUCTION ENGINEERING (APPENDIX H)	RFKLOHN-0008	
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCTIONAL DESIGN - HWY ENGINEERING (APPENDIX F) VOL 2 - ALTERN. .ALIGNMTS	RFKLOHN-0009	
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCTIONAL DESIGN - HWY ENGINEERING (APPENDIX F) VOL 3 - RECOMND..ALIGNMTS	RFKLOHN-0010	
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCTIONAL DESIGN -TRAFFIC ENGINEERING (APPENDIX G)	RFKLOHN-0011	
ST	STS HWY CAULFIELD INTERCHANGE TO FURRY CREEK FUNCTIONAL DESIGN -ENVIRONMENTAL IMPACT ASSESSMENT (APPENDIX B)	RFKLOHN-0012	
ST	ROCK DISPOSAL SYSTEM - SEA TO SKY HIGHWAY PROJECT (27NOV03)	RFLNS-0001	
ST	DWG: GENERAL ARRANGEMENT SUNSET MARINA PROPOSAL ROCK DISPOSAL SYSTEM (27NOV03)	RFLNS-0002	
ST	DWG: SECTION VIEWS SUNSET MARINA PROPOSAL ROCK DISPOSAL SYSTEM (27NOV03)	RFLNS-0003	
ST	DWG: GENERAL ARRANGEMENT SUNSET MARINA PROPOSAL ROCK DISPOSAL SYSTEM (27NOV03)	RFLNS-0004	
ST	ALTERNATE ROUTES ANALYSIS VAN.-SQUAMISH & CORRIDOR IMPROVEMENT ANALYSIS SQUAM.-CACHE CR.	RFMOT-0052	
ST	DETAILS OF ROAD - TRANS CANADA HWY & STS HWY #99	RFMOT-0150	
ST	VANCOUVER TO SQUAMISH CORRIDOR STUDY (MAY 1983)	RFMOT-0164	
ST	VANCOUVER TO SQUAMISH HIGHWAY PLANNING AND PRE-DESIGN ENGINEERING STUDY (HAMILTON & ASSOC.- NOV 1989)	RFMOT-0166	
ST	CD-ROM: RAILWAY CROSSING INFORMATION DATABASE VERSION 1.0 (NOV 2000)	RFMOT-0214	
ST	SOUTH COAST REGION HIGHWAY PLANNING LIBRARY CATALOGUE	RFMOT-0222	
ST	SAFETY PLANNING REVIEW HIGHWAY 99 NORTH HORSESHOE BAY TO HIGHWAY 97 BC (HAMILTON ASSOCIATES, OCT 99)	RFMOT-0320	

Category	Relevant Info, available for viewing on March 8, 2004 Title	Document No.	Viewing Room Box. No.
ST	STS TRANSPORTATION DEMAND MANAGEMENT (TDM) STUDY, FINAL REPORT (TSI CONSULTANTS - NOV 2003)	RFMOT-0321	
ST	HOWE SOUND DISTRICT BRUNSWICK PIT - PIT DEVELOPMENT PLAN, FIGURE 1 (30SEP97)	RFMOT-0322	
ST	BRUNSWICK PIT AGGREGATE INVESTIGATION/PIT DEVELOPMENT (MOT) APR 16 1996)	RFMOT-0348	
ST	HOWE SOUND DISTRICT BRUNSWICK PIT - COMPLETION PLAN, FIGURE 2 (28MAR96)	RFMOT-0323	
ST	STS PROJECT, SOUTH COAST REGION AGGREGATE TESTING AND EVALUATION (NOV 28 2003) (TROW ASSOCIATES)	RFMOT-0342	
ST	DRAFT ROADWAY DATA COLLECTION AND EVALUATION, HWY 99 HSB TO M CREEK BRIDGE (E&A ENG) (FEB 2004)	RFMOT-343	
ST	DEBRIS TORRENT AND FLOODING HAZARDS - HIGHWAY 99, HOWE SOUND (APRIL 1983)	RFTHURBER-0001	
ST	OPEN-GRADED ASPHALT AND SUPERPAVE PAVEMENTS: ASSESSMENT OF TRAFFIC NOISE REDUCTION EFFECTS (WAKEFIELD)(MAR 2000)	RFWAKE-0002	
	End of section 4, Relevant Info, available for viewing on March 8 2004		

SCHEDULE O: TECHNICAL REPORTS

BRITISH COLUMBIA

MINISTRY OF TRANSPORTATION
Geotechnical, Materials, & Pavement Engineering

Draft

PAVEMENT STRUCTURE DESIGN GUIDELINES

(Technical Circular T-01/04)

Geotechnical, Materials and Pavement Engineering

February, 2004

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PAVEMENT STRUCTURE DESIGN GUIDELINES

1.0 PURPOSE

The purpose of this draft Technical Circular is to define pavement design guidelines for new construction and rehabilitation in the Province of British Columbia.

This guidelines provide typical pavement structures to be considered in the design process by British Columbia Ministry of Transportation personnel, private consultants and contractors.

Four typical designs, based on general roadway classification, are used to categorize British Columbia's provincial road network. Twenty (20) year design Equivalent Single Axle Loads (ESAL's) are the primary criteria used for selection of the appropriate typical design with additional subgrade material criteria applied to low volume roads and subdivision roads. These are summarized as follows:

Standard Type	Roadway Designation	20 yr Design ESAL Criteria
Type "A"	High Volume Roads	> 1,000,000
Type "B"	Medium Volume Roads	100,000 to 1,000,000
Type "C"	Low Volume Roads	< 100,000
Type "D"	Subdivision Roads	< 100,000

The guidelines show the thicknesses of Asphalt Pavement (AP) and Crushed Base Course (CBC). The structural requirements for Select Granular Sub-base (SGSB) thickness are to be determined by the pavement designer based on traffic loading, subgrade type and local environmental conditions (drainage conditions and frost penetration). Minimum thicknesses of Select Granular Sub-base SGSB (Reference: Section 3.2) must be considered.

Where specific site conditions and economic benefits warrant departure from these pavement design guidelines, Crushed Granular Equivalency (CGE) factors can be used as a guide for development of alternative pavement designs.

These guidelines are reflected in the drawings currently in the BC Supplement to the TAC Geometric Design Guide

2.0 BACKGROUND

British Columbia pavement designs applied to primary highways have evolved from relatively thin pavement layers consisting of 75 mm of dense graded Asphalt Pavement (AP) placed on Crushed Base Course (CBC) and Select Granular Sub-base (SGSB) layers; to designs that incorporate a 50 mm dense graded Asphalt Pavement (AP) wearing course over 100 mm of Asphalt Base Course (ABC) over Crushed Base Course (CBC) and Select Granular Sub-base (SGSB) layers; to typical designs of 100 mm of Asphalt Pavement over Crushed Base Course and Select Granular Sub-base layers.

While use of ABC layers may be appropriate in specific circumstances, its use is discouraged as a result of problems that have arisen related to cracking and rehabilitation.

Current pavement design guidelines encourage the use of thinner, flexible asphalt pavements with associated saving in construction cost and ease of effective rehabilitation.

3.0 PROCEDURE

3.1 PAVEMENT STRUCTURE DESIGN GUIDELINES

Current pavement design guidelines replace those specified in the BC Supplement to the TAC Geometric Design Guide are summarized in Tables 1 and 2 and illustrated with typical cross-sections in Figures 1, 2, 3 and 4.

Pavement designs shall incorporate the use of the 1993 AASHTO Guide for the Design of Pavement Structures and design checks can be made as an option by using the Asphalt Institute's Thickness Design – Asphalt Pavements for Highways and Streets (MS-1) and Asphalt Institute's "Asphalt Overlay for Highway and Street Rehabilitation" (MS-17) and other methods such as ELMOD and the Shell method.

The analysis shall typically incorporate a twenty year analysis period.

Rehabilitation options with life cycle costing shall be considered in the design process.

One option shall be recommended.

Alternative designs shall be communicated to the Chief, Geotechnical, Materials and Pavement Engineer in Victoria for information.

3.2 SELECT GRANULAR SUB-BASE (SGSB) REQUIREMENTS

The structural requirements for Select Granular Sub-base (SGSB) thickness are to be determined by the pavement designer based on traffic loading, subgrade type and local environmental conditions (drainage conditions and frost penetration).

Dredged river sand will not be considered acceptable for use as SGSB in pavement structures.

The following specifications for minimum Select Granular Sub-base (SGSB) thicknesses shall be considered as a guide.

3.2.1 Rock Subgrades

A minimum thickness of 150mm Select Granular Sub Bases (SGSB) shall be applied over rock subgrades

All leveling materials applied directly to blasted rock cuts shall be of Select Granular Sub-base (SGSB) quality.

3.2.2 Soil Subgrades

PAVEMENT STRUCTURE DESIGN GUIDELINES - TYPES "A" & "B" (>100,000ESALs)

1. A minimum thickness of 300 mm Select Granular Sub-base (SGSB) shall be applied over subgrade materials.
2. Select Granular Sub-base (SGSB) may not be required in exceptional circumstances where the following criteria are met:

Structural Design Criteria is satisfied

and

Subgrade material consists of clean granular deposits that satisfy Select Granular Sub-base (SGSB) gradation and construction criteria in accordance with the latest version of British Columbia Ministry of Transportation Standard Specifications for Highway Construction - Section 202 "GRANULAR SURFACING, BASE AND SUB-BASES".

PAVEMENT STRUCTURE DESIGN GUIDELINES - TYPES "C" & "D" (<100,000 ESALs)

1. Thickness design for Select Granular Sub-base (SGSB) shall be based on subgrade material type as follows:

150 mm Select Granular Sub-base (SGSB) on Coarse Grained Subgrades (Unified Soils Classification System - GW/GP/GM/GC/SW/SP/SM/SC) where groundwater does not pose a drainage problem and frost penetration does not affect the structure.

300 mm Select Granular Sub-base (SGSB) on Fine Grained Subgrades (Unified Soils Classification System - ML/CL/OL//MH/CH/OH).

2. Select Granular Sub-base (SGSB) may not be required in exceptional circumstances where the following criteria have been met:

Structural Design Criteria is satisfied

and

Subgrade material consists of clean granular deposits that satisfy Select Granular Sub-base (SGSB) gradation and construction criteria in accordance with the latest version of British Columbia Ministry of Transportation Standard Specifications for Highway Construction -Section 202 "GRANULAR SURFACING, BASE AND SUB-BASES".

3.2.3 TRAFFIC ANALYSIS

The recommended method for determination of 20 year design Equivalent Single Axle Loads (ESAL's) is the Modified Asphalt Institute Method specified in Table 3. Furthermore, it is recommended that in the application of this method, ESAL's for various truck axle configurations are determined based on the Transportation Association of Canada (TAC) Vehicle Weights and Dimensions Study, illustrated in Figure 5 (ESAL's vs Axle Group Load).

TABLE – O-1 PAVEMENT DESIGN STANDARDS

Type "A" (Reference: Figure - 1)
> 1,000,000 ESAL's

100 mm AP
150 mm of 25mm CBC
150 mm of : 75mm CBC,
50mm CBC, or
25mm CBC
SGSB (Soil* 300 mm, Rock** 150 mm)

Type "B" (Reference: Figure – 2)
100,000 to 1,000,000 EASL's

75 mm AP [3]
150 mm of 25mm CBC
150 mm of : 75mm CBC,
50mm CBC, or
25mm CBC
SGSB: 300 mm over Soil sub-grade [1],
150 mm over Rock sub-grade [2]

Notes:
See Table O-2

TABLE O-2 PAVEMENT DESIGN STANDARDS

Type "C" (Reference: Figure 3)
Low Volume Roads < 100,000 ESAL's

50 mm AP
225 mm of 25mm CBC
SGSB Soil [1, 2, 3] see notes below,
150 mm over Rock [4]

Type "D" (Reference: Figure 4)
Subdivision roads < 100,000 EASL's

50 mm AP
225 mm of 25mm CBC
SGSB Soil [1, 2, 3]see notes below,
150 mm over Rock [4]

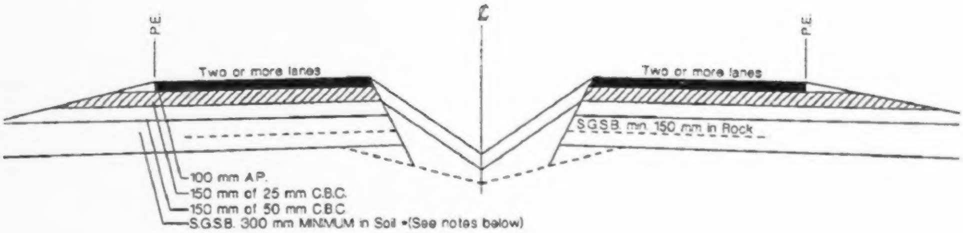
Notes:

[1] SGSB 150 mm SGSB on Coarse Grained Subgrades (Unified Soils Classification System - GW/GP/GM/GC/SW/SP/SM/SC) where groundwater does not pose a drainage problem and frost penetration does not affect the structure.

[2] SGSB 300 mm SGSB on Fine Grained Subgrades (Unified Soils Classification System - ML/CL/OL//MH/CH/OH).

[3] 75 mm AP specified in Type "B" shall be constructed in 2 lifts of 19 mm MAXIMUM size aggregate or in a single lift of 25 mm MAXIMUM size aggregate (in accordance with the latest version of B.C. MOT Standard Specifications for Highway Construction - Section 502.

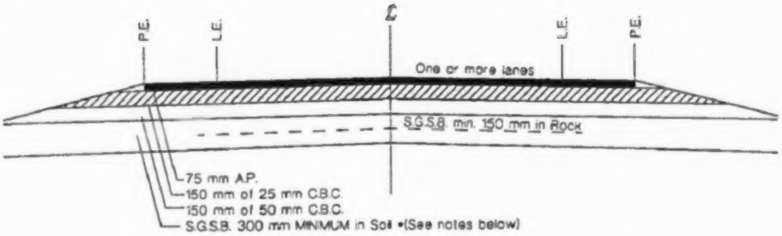
FIGURE O-1


P.E.
℄
P.E.
Two or more lanes
Two or more lanes
S.G.S.B. min 150 mm in Rock
100 mm A.P.
150 mm of 25 mm C.B.C.
150 mm of 50 mm C.B.C.
S.G.S.B. 300 mm MINIMUM in Soil •(See notes below)

TYPE "A"

HIGH VOLUME ROADS
> 1,000,000 ESAL's

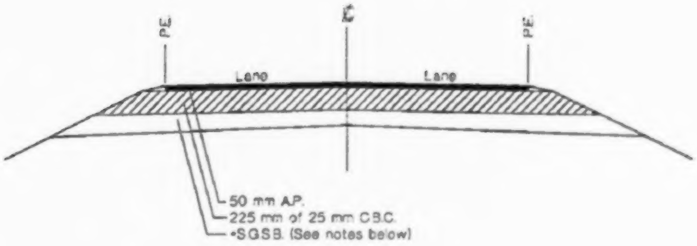
FIGURE O-2


P.E.
L.E.
℄
L.E.
P.E.
One or more lanes
S.G.S.B. min. 150 mm in Rock
75 mm A.P.
150 mm of 25 mm C.B.C.
150 mm of 50 mm C.B.C.
S.G.S.B. 300 mm MINIMUM in Soil •(See notes below)

TYPE "B"

MEDIUM VOLUME ROADS
100,000 to 1,000,000 ESAL's

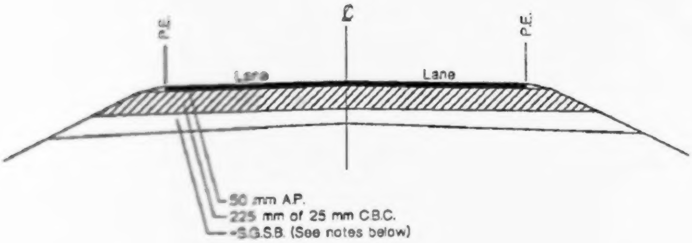
FIGURE O-3


P.E.
℄
P.E.
Lane
Lane
50 mm A.P.
225 mm of 25 mm C.B.C.
•S.G.S.B. (See notes below)

TYPE "C"

LOW VOLUME ROADS
< 100,000 ESAL's

FIGURE O-4


P.E.
℄
P.E.
Lane
Lane
50 mm A.P.
225 mm of 25 mm C.B.C.
-S.G.S.B. (See notes below)

TYPE "D"

SUBDIVISION ROADS
< 100,000 ESAL's
&
INFREQUENT USE BY HEAVY COMMERCIAL VEHICLES

TABLE O-3 ESAL CALCULATIONS MODIFIED ASPHALT INSTITUTE METHOD

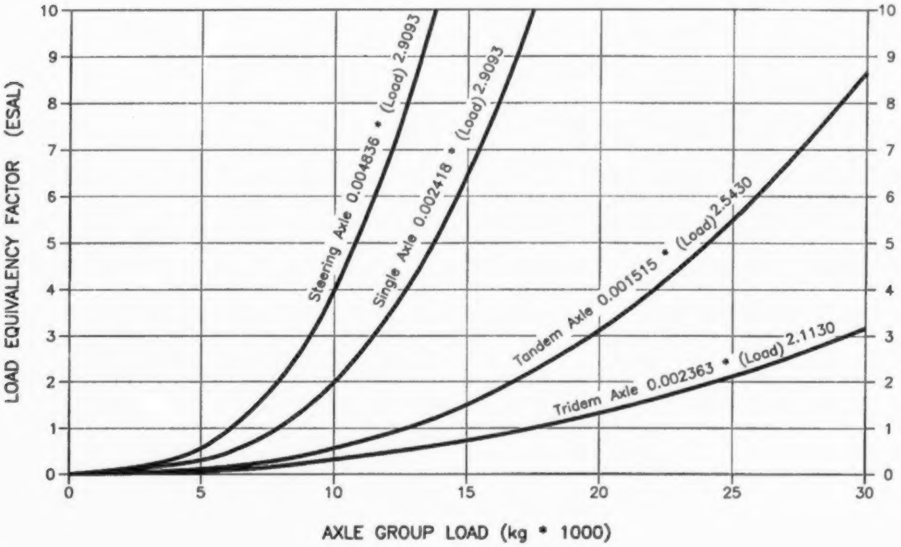
$$ESAL = AADT * HVP * HVDF * NALV * TDY$$

where:

ESAL = Equivalent single axle loads per lane per year (for the base year)
AADT = Average annual daily traffic (all lanes & both directions)
HVP = Heavy vehicle percentage (divided by 100)
HVDF = Heavy vehicle distribution factor (% of heavy vehicles in the design lane)
NALV = Number of equivalent axle loads per vehicle (ESAL's per vehicle)
TDY = Traffic days per year

Note:
ESAL's (base year) x 20 yr. traffic growth rate factor = 20 year Design ESAL's.

Figure O-5 TAC VEHICLE WEIGHTS AND DIMENSIONS STUDY



3.4 AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) PAVEMENT DESIGN CRITERIA

In order to ensure a consistent design approach using the American Association of State Highway and Transportation Officials (AASHTO) Pavement Design Method for new construction, the following criteria shall apply:

Analysis Period

= 20 Years

Reliability (R)

High volume & medium volume roads: R = 85%

Low volume & subdivision roads: R = 75%

Standard Deviation

(S_o): $S_o = 0.45$

Pavement Serviceability Index (PSI)

Initial Serviceability Index: $(p_i) = 4.2$

Terminal Serviceability Index: $(p_t) = 2.5$

Materials Characterization:

Material Description	Resilient Modulus * (M_R) MPa (approx. psi)	Structural Layer Coefficient (a_i)
Asphalt Pavement (AP)	2,750 (400,000)	0.40
Crushed Base Course (CBC) (25 mm, 50 mm & 75 mm)	200 (30,000)	0.14
Select Granular Sub-base (SGSB)	100 (15,000)	0.10

*If field or laboratory resilient modulus values (m_r) are available, they may be used.

Drainage Coefficients (mi):

The following drainage coefficients (m_i) shall apply to untreated Crushed Base Course (CBC) and Select Granular Sub-base (SGSB) materials:

m_i	Crushed Base Course (CBC) Select Granular Sub-base (SGSB) Description
1.15	Open Graded Crushed Base Course (CBC.) & Select Granular Sub-base (SGSB)
0.95	High Quality Crushed Base Course (CBC) & Select Granular Sub-base (S.G.S.S.) (i.e. <5% fines passing .075 mm sieve)
0.80	Poor quality Crushed Base Course (CBC) & Select Granular Sub-base (SGSB) (i.e. >5% fines passing .075 mm sieve)

3.5 ALTERNATIVE PAVEMENT DESIGNS

Design options using life cycle costing are to be considered for presentation. One option shall be recommended.

Designs can be checked using Asphalt Institute methods, or others, (as a check only).

Where site-specific conditions warrant (i.e. granular quality, granular availability, etc.) alternative pavement designs may be generated using the Crushed Granular Equivalency (CGE) concept as a guide.

The economic benefit of any alternative design (minimum practical thicknesses are to be maintained) is to be determined on a project specific basis.

CGE factors for New Construction and Pavement Rehabilitation are provided in Tables 4 and 5 respectively.

Dynatest ELMOD software is acceptable for rehabilitation overlay design. However, ELMOD is not to be used for design of new construction.

TABLE O-4 CRUSHED GRANULAR EQUIVALENCY (CGE) FACTORS NEW CONSTRUCTION

PAVEMENT MATERIAL	CGE FACTOR
Bituminous Bound Layers	
Hot Mix Asphalt Pavement (AP)	2.0
B.C. Stabilizer	1.5
Open Graded Granular Base (Bituminous Bound)	1.5**
Asphalt Base Course (ABC)	1.7
Recycled Asphalt Pavement in Granular Base Course (min 50% Aggregate)	0.6*
Portland Cement Bound Layers	
Portland Cement Concrete	3.0
Roller Compacted Concrete	2.5
Cement Treated Base	1.8
Open Graded Granular Base (Cement Bound)	1.6
Unbound Crushed Base Course Layers (25 mm, 50 mm & 75 mm)	
Well Graded Crushed Unbound Granular Base	1.0
Intermediate Graded Crushed Unbound Granular Base	1.1**
Open Graded Crushed Unbound Granular Base	1.2**
Unbound Granular Sub-base Layers	
Well Graded Crushed Unbound Granular Sub-base	1.0
Intermediate Graded Crushed Unbound Granular Sub-base	1.1**
Open Graded Crushed Unbound Granular Sub-base	1.2**
Pit Run Granular Sub-base	0.7
Screened Granular Sub-base	0.7

* Based on British Columbia Ministry of Transportation experience.

** Based on British Columbia Ministry of Transportation experience and must be confined with a minimum of 75 mm of dense graded Asphalt Pavement (AP).

Notes:

1. **SURFACE TREATMENT:**
For design, surface treatments are assumed to have no structural strength. Built-up layers of surface treatment
(>75 mm thickness) could be assigned a CGE of 1.5.

2. **GEOTEXTILES AND GEOGRIDS:**
Geotextiles do not provide structural strength and are to be used only as separators. Geogrids can be used to provide structural equivalence if strength can be mobilized within the grid.

TABLE O-5 CRUSHED GRANULAR EQUIVALENCY (CGE) FACTORS PAVEMENT REHABILITATION

PAVEMENT MATERIAL	CGE FACTOR
Bituminous Bound Layers	
Hot-Mix Asphalt Pavement (uncracked)	2.0
Hot-Mix Asphalt Pavement (cracked)	1.5
Hot-in-Place Recycled Asphalt Pavement	1.7
Cold-in-Place Recycled Asphalt Pavement	1.5
Recycled Asphalt Pavement in Granular Base Course (min 50% aggregate)	0.6**
Portland Cement Bound Layers	
Portland Cement Concrete (good condition)	3.0
Portland Cement Concrete (fair condition)	2.5
Portland Cement Concrete (poor condition)	2.0
Cement Treated Base	1.5
Unbound Crushed Base Course Layers(25 mm, 50 mm & 75 mm)	
Old Granular Base	0.7
Old Granular Sub-base (Crushed)	0.7

** Based on British Columbia Ministry of Transportation experience.

Notes:

1. **SURFACE TREATMENT:**
   For design, surface treatments are assumed to have no structural strength. Built-up layers of surface treatment
   (>75 mm thickness) could be assigned a CGE of 1.5 (uncracked) and 1.1 (cracked).

2. **GEOTEXTILES AND GEOGRIDS:**
   Geotextiles do not provide structural strength and are to be used only as separators. Geogrids can be used to provide strucural equivalence if strength can be mobilized within the grid.

3.6 RESPONSIBILITIES

In accordance with Section 3.5, Alternative Pavement Designs are to be communicated to the Chief, Geotechnical, Materials and Pavement Engineer.

Any future modifications to the PAVEMENT STRUCTURE DESIGN GUIDELINES shall be coordinated and issued by the Chief, Geotechnical, Materials and Pavement Engineer in Victoria.

CONTACT:

Michael F. Oliver, P.Eng.
Chief, Geotechnical, Materials and Pavement Engineer
Engineering Branch, Victoria
(250) 387-3353

Dirk Nyland, P.Eng.
Chief Engineer

cc: A.D.M. Highway Dept.
cc: A.D.M. Planning & Major Projects
cc: All Regional Directors
cc: RGME's

SCHEDULE P: MATERIAL MANAGEMENT

P.0 MATERIAL MANAGEMENT

P1.1 MATERIAL MANAGEMENT

The Contractor is advised that the highway right of way within the contract area is constrained and provides few opportunities for staging, production and stockpiling of construction aggregates. The Contractor shall be responsible for disposal of all surplus excavated materials not required for completion of the constructed works.

The Contractor is advised that Type A materials along the alignment are generally suitable for construction aggregates, with the exception of the section from Newman Creek to Lonetree Creek, discussed below. Other limitations are discussed further in the Special Provisions.

The Contractor is advised that Type A materials excavated between Newman Creek (approx. Stn. 108+490) and Lonetree Creek (approx. Stn. 109+700) are considered Potential Acid Generating (PAG) and therefore are not usable for incorporation into the final construction works. Options for disposal of this material are discussed further in this Schedule. The Contractor is further advised that Type A materials excavated between Stations 109+245 and 109+275 are considered reactive acid generating (AG) rock, and are not eligible for marine disposal. PAG and AG materials must be segregated from non-PAG materials and can only be temporarily stockpiled, under conditions of full containment. Options for disposal of this material is also discussed in this Schedule.

The Contractor may wish to transport materials by barge. The Ministry of Transportation has identified two potential sites for barge loading, however offers no assurance that either of these sites will be available for use by the Contractor. Opportunities for construction and operation of barge loading facilities are discussed further in this Schedule.

The Contractor may use the Ministry of Transportation's Brunswick Pit for construction staging, aggregate processing and stockpiling purposes. Brunswick Pit will not be available to the Contractor for extraction purposes. The Contractor is advised that all excavated Type A materials left in stockpile at Brunswick Pit following completion of construction shall be processed into a construction aggregate material with a maximum grain size of 300 mm. The Contractor is advised that Brunswick Pit is considered a mine under the Mines Act, therefore all provision of this act shall apply. The Contractor's attention is also drawn to SS 145.26, Work in Ministry Pits or Quarries, which is an applicable specification for this project.

The Contractor shall be responsible for contacting the Road and Bridge Maintenance Contractor a minimum of two weeks prior to use of pit(s). The Contractor shall coordinate his activities with those of the Road and Bridge Maintenance Contractor and other parties on the site.

The Contractor may also dispose of surplus excavated materials, except PAG materials, into designated rock fill embankment sites within the highway right of way between Brunswick Beach and Porteau Cove. These designated sites are located below the existing highway alignment and will require access construction, clearing, grubbing and stripping prior to embankment construction. Work associated with these disposal areas shall be done in accordance with the Standard Specifications for Highway Construction, 2004 edition, and in particular, rock embankments shall be constructed in accordance with Section 201.36.

One of the rock fills sites is located adjacent to the decommissioned Tunnel Point Rest area approximately 600m north of M Creek. The other site is located downslope of the highway between Loggers Creek and Deeks Creek. These areas are shown in the Sea to Sky Highway Highway Improvement Project Application, Volume 1, Mapping and Drawing Folio Preliminary Alignment Preliminary Clearing Limits Drawings 41DK-PAHS-0410 RevPC and 41DK-PAHS-0411 RecPC.

P1.2 SUNSET MARINA BARGE LOADING FACILITY

The Proponent is advised that the Ministry of Transportation has investigated, in a conceptual way, the construction and operation of a barge loading facility at the Sunset Marina. The site was identified as having potential as a barge loading facility due to its proximity to construction areas with surplus volumes of rock, its current commercial use and its access via public roads. To this end, project staff have undertaken preliminary discussions with the owner of the marina, who was generally supportive of the concept. The concept is briefly described in the project Environmental Assessment Application, however the project has not pursued any formal approvals or permits pertaining to this installation or use. The proponent may wish to pursue this concept further with the marina owner and regulatory authorities.

In general, the following issues have been identified with the use of this facility:

- The marina is a privately owned and operated commercial facility and agreements would have to be reached with the owner.
- The site is accessed via Lawrence Way, a municipal road over which the District of West Vancouver has jurisdictional authority.
- Lawrence Way is steep, narrow and winding, and the pavement strength parameters are unknown. The road may require improvements or total reconstruction to facilitate haul trucks.
- The gravel parking lot on the north side of the marina is owned by the District of West Vancouver and leased back to the marina owner. This parking lot was identified as the main staging area for barge loading. It is unknown what approvals are required for use of this parking lot for barge loading operations.
- The Ministry has neither pursued the regulatory permitting for this facility nor undertaken significant discussions with the regulatory agencies for the construction and operation of a barge loading facility at this location.
- The marina is located adjacent to the Montizambert Wynd and Lawrence Way communities. The construction and operation of a barge loading facility

at this site will result in impacts to these communities. Agreements would have to be reached with these communities.

The Ministry of Transportation also investigated the feasibility of constructing and operating a conveyor system to transport surplus rock to the potential barge loading facility. LNS Services Ltd., a design-build contractor specializing in material management systems were retained by the project, and produced a feasibility report. The report identified a potential staging/crushing at the south end of the Monitzambert Creek Bridge, a conveyor routing under the bridge, along the south flank of the creek, over the BC Rail tracks, down to the marina parking lot and onto the potential barge staging area. The report, which is available in the Data Room, concludes the conveyor system is technically feasible to construct. The issues identified with the system include:

- It is relatively expensive to construct.
- Conveyor routing passes through a section of a District of West Vancouver park. It is unknown whether approval could be obtained from the District to construct and operate a conveyor system through this park.
- The conveyor system will require clearing of a swath to facilitate access, construction, operation and decommissioning of the facility.
- The conveyor system will have an impact on adjacent communities, particularly with respect to noise and dust.

The proponent will be responsible for all costs associated with the approvals, permits, installation, operation, repairs, decommissioning and removals pursuant to the facility and other affected properties.

P1.3 PORTEAU COVE BARGE LOADING FACILITY

The Proponent is advised that the Ministry of Transportation is pursuing a park use permit authorizing the limited utilization of the emergency ferry facility at Porteau Cove Marine Park for barge loading operations. Generally the process to acquire this park use permit includes the following:

1. The Ministry of Water Land and Air Protection, Environmental Stewardship Division (Parks),the responsible agency, require the Ministry of Transportation to provide compelling rationale for the use of this facility for barge loading.
2. Preparation of a reference plan of that portion of the park required for barge loading operations. This plan will include the entrance road to the park, the day use parking lot, the ferry trestle and ramp, and that portion of the foreshore required for docking a barge.
3. Preparation of documentation for a legislative amendment to convert that portion of the park defined under the reference plan from Class A Park to Recreational Use Area. Should this legislative amendment be passed, Parks will then be in a position to issue a Park Use Permit for the use as a barge loading facility. It is anticipated that this amendment will be before government during the spring sitting of the legislature.

The Ministry of Transportation offers no warranty that the proposed legislative amendment will be approved by the government. Therefore no warranty is offered with respect to the availability of the facility for use as a barge loading facility.

It is further anticipated that should the legislative amendment be approved, the facility would be made available for barge loading purposes for limited operational windows, which would not include summer months.

No assumption should be made by the proponent pursuant to the legislative amendment or approval for use of this facility for barge loading. If approval is obtained or reasonably determined to be forthcoming during the proposal period, an addendum will be issued to the proponents.

P1.4 DISPOSAL OF PAG MATERIAL

The Proponent is advised that Type A materials excavated between Newman Creek (approximately Stn. 108+470) to the south and Lonetree Creek (approximately 109+700) to the north are considered Potential Acid Generating and Metal Leaching (PAG), therefore is not suitable for use in the constructed works, including embankments, sub-base, base, asphalt concrete or Portland cement concrete. The Contractor shall dispose of these materials off site at facilities approved to accept this type of material.

The Ministry of Transportation has undertaken discussions with agencies responsible for regulation of the approved marine disposal sites at Watts Point and Point Grey and intend to acquire a permit to dispose of PAG materials at these locations.

The rock between Stations 109+245 and 109+275 is considered reactive and does not qualify for marine disposal. An option for disposal of this material at the Jane Basin Glory Hole at Britannia Mines is discussed below.

P1.4.1 Disposal of PAG Materials at Britannia Mines

The Ministry of Transportation has entered into discussions with various agencies responsible for the Britannia Mines Remediation Project and is currently pursuing a permit to dispose of PAG and reactive PAG materials in the Jane Basin Glory Hole, located east of the highway at the old Britannia Mine site. Access can be gained to the site via the Britannia Forest Service Road, accessed off Highway 99 just north of Furry Creek. The Britannia FSR connects with another FSR at the Mount Sheer town site. Alternatively, the Mount Sheer town site can be accessed through Britannia Village, however this route is not considered as viable as the Britannia FSR.

The permit for disposal of surplus materials into the Jane Basin Glory Hole will include requirements for road upgrades, hours of operation, communications requirements, dumping plans and other relevant requirements which will then become the responsibility of the Contractor. The permit application has not yet been completed and the permit may not be granted at the time of the due date for the Proposal. The Proponents will be advised of further developments in this regard as they develop during the proposal period.

The Britannia FSR is managed by Richmond Plywood and has recently been upgraded in areas. The Contractor is advised to contact Tom Coles of Richmond Plywood at (604) 938-0856 to determine the suitability of the road for highway trucks, any requirements for further upgrades and any cost sharing required to facilitate joint use of the road.

At the time of preparation of this RFP, the section of road between Mount Sheer and the Jane Basin Glory Hole was not considered accessible by highway trucks, and was only considered accessible by off-road trucks during the summer months. Therefore, should the Contractor elect to utilize the Jane basin Glory Hole for disposal of surplus Type A, a fully contained transfer facility will be required, possibly at the Mount Sheer town site. The transfer station shall be contained to preclude contamination of the site and the possibility of drainage runoff from entering a watercourse.

The access road between Mount Sheer and the Jane Basin Glory Hole follows the north side of Britannia Creek, crosses Britannia Creek near its confluence with Marmot Creek, then proceeds westerly and southerly to the Jane Basin Glory Hole. After crossing Britannia Creek, the road then becomes the jurisdiction of the Ministry of Energy and Mines and is subject to the requirements of the Mines Act. This section of road may have to be upgrade to meet the requirements of the Mines Act; a communications strategy developed to allow for the safe passage of multiple vehicles on the road; or a combination of both. The Contractor is advised to contact Ed Taje, Inspector of Mines, Ministry of Energy and Mines, at (250) 952-0732 for advice pertaining to the requirements for use of this road for haul purposes.

P1.5 SUITABILITY OF MATERIALS

P1.5.1 Results of Corridor Level Aggregate Suitability Testing

The Contractor is advised that the Ministry of Transportation has completed a corridor level Aggregate Sampling, Testing and Evaluation program along the Sea to Sky Highway between Horseshoe Bay and Whistler. The objective of the program was to determine the suitability of the rock cut materials along the corridor for the manufacture of construction aggregates. Within the contract limits, suitability is summarized by the following:

105+240 to 105+400 (Sclufield Creek to Montizambert Creek)

The aggregate is a high quality architectural grade material and is considered suitable for the production of granular base and asphalt aggregates, with the following provisions:

- If used as an asphalt aggregate, an anti-stripping agent is required.

105+600 to 105+880 (Montizambert Creek to 300m north)

The aggregate is generally a sound, good quality material and is considered suitable for the production of granular base and asphalt aggregates, with the following provisions.

- If used as an asphalt aggregate, an anti-stripping agent is required.
- The proportion of flat and elongated particles produced during crushing may exceed the allowable maximum of 10% with respect to ASTM Standard D4791. This could be minimized with the selection of a suitable aggregate crushing operation.

105+940 to 106+580 (300m north of Montizambert Creek to Strip Creek, South Section)

The aggregate is generally a sound, good quality material and is considered suitable for the production of granular base and asphalt aggregates, with the following provision.

- The proportion of flat and elongated particles produced during crushing may exceed the allowable maximum of 10% with respect to ASTM Standard D4791. This could be minimized with the selection of a suitable aggregate crushing operation.

105+940 to 106+580 (300m north of Montizambert Creek to Strip Creek, North Section)

The rock is considered suitable for the production of granular base and asphalt aggregates, with the following provisions.

- If used as an asphalt aggregate, an anti-stripping agent is required.
- Degradation is poorer than typical high quality asphalt aggregates, therefore this material shall only be used in the lower asphalt pavement layer.

106+780 to 107+620 (Strip Creek to Turpin Creek)

The aggregate is generally a sound, good quality material and is considered suitable for the production of granular base and asphalt aggregates, with the following provision.

- If used as an asphalt aggregate, an anti-stripping agent is required.

108+620 to 109+280 (Newman to Lonetree Creek)

The aggregates from this section are considered Potential Acid generating and Metal Leaching (PAG) therefore are not suitable for use in construction.

109+800 to 110+580 (Lonetree Creek to Kelvin Grove)

The aggregate is of marginal quality with a degradation value of 35, although other physical properties are within specification, including LA abrasion. The material is considered suitable for the production of granular base and asphalt aggregates, with the following provision.

- The material shall only be used in the lower asphalt pavement layer, if used as asphalt aggregate.

Suitability for Use as Concrete Aggregate

Due to the proximity to the metropolitan Vancouver area and availability of commercial ready-mixed concrete suppliers, extensive testing for suitability as concrete aggregates was not undertaken in this part of the corridor. The Ministry of Transportation assumes the material would be used as coarse aggregate only, as the materials would produce a harsh sand. The aggregate is thought to be less suitable than locally available fluvial aggregates for conventional concrete applications, due to workability and placing issues.

Testing for concrete aggregate suitability was carried out on samples in the Strip Creek to Turpin Creek and Lonetree Creek to Kelvin Grove sections. These aggregates were found to be reactive when tested for Alkali Aggregate Reactivity (AAR). If used a concrete aggregates, the following criteria shall apply for mitigation of AAR:

- Use of a low alkali cement with a total Na2O equivalent of < 1.8 kg/m3;
- Minimum flyash content of 25% (as a replacement of total cementing materials by mass); flyash must have CaO content of < 8%.

P1.5.2 Additional Testing Requirements

The Contractor is advised that the testing program undertaken was a high level corridor study and was not intended to provide qualification testing for the aggregates. The evaluation was performed on a limited sampling of materials, collected primarily from the ditches adjacent to the existing rock slopes. The contractor will be required to undertake qualification and production testing programs for all aggregates to be incorporated into the works, in accordance with the Standard Specifications for Highway Construction, latest edition.

SCHEDULE Q: THE PROPOSAL

Q. THE PROPOSAL

The Proposal provided by the Proponent as accepted by the Ministry.